

The National Locksmith®

September 1993
Volume 64, No. 9



***This
issue:
SAFES
AND
SAFE
PRODUCTS***

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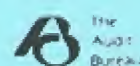
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COMMENTARY

It's the all new and improved The National Locksmith

For the past month I have been like a kid in a candy store! Art Director Jim Darow and Production Director Sandy Kucharski have gotten tired of seeing my face peering around their office walls. But I can't help myself. It has been a lot of fun watching the development of a new format for *The National Locksmith* magazine.



Marc Goldberg
Editor/Publisher

This month's issue shows many improvements and changes over our former look. By next month, the changes will be even more apparent as we complete a conversion to desktop publishing. At that time, we can finish phasing in the designs Jim and Sandy have been working on.

I believe you will find our new format more user friendly than ever before. The excellent content of the magazine is also scheduled to change and improve through 1994. After you see the October issue and our final improvements, drop us a line and let us know what you think of the new look.

Another new feature in this month's issue is an article written by yours truly in Spanish. You may not realize it, but we have a large number of readers in foreign countries whose native tongue is Spanish. This article is about the national convention for locksmiths which I attended recently in Mexico. I was pleased at the desire for education I found among the locksmiths in Mexico. They are working hard to improve the technology there.

In coming months, we will feature occasional articles in Spanish. But don't worry, we have added extra pages to the magazine so that this international section accompanies additional articles in English. (I bet you didn't know I was fluent in Spanish!)

A couple of years back, we sponsored a Funny Locksmith Stories Contest, and it went over

very big. So here's your chance to send in your funniest tales of life as a locksmith. Every one has their favorite story about an unusual or surprising job. All you have to do to enter, is to write down your funny story and send it to: Funny Stories Contest, *The National Locksmith*, 1533 Burgundy Parkway, IL 60107.

We will be printing most of the stories we receive, so grab paper and pen, and tell us your best stories! Oh, by the way, let's try and keep 'em clean. Last time we did this I got a bunch of stories about locksmiths being called out to open padlocks in some rather kinky situations.

But most of them were good clean fun. Like the one about the guy who went into the bathroom stall at a wedding, and the door refused to open. I believe it was the bride who called out the locksmith to free her groom. Then there was the locksmith who was called out to open a late model car with a dog trapped inside. Each time he popped the lock, the dog jumped on the button so fast he couldn't open the door. Then there were numerous stories about homeowners in various states of undress calling the locksmith out to let them back into their homes.

Perhaps there is no one better at telling these stories than our own Sara Probasco. So it is fitting that as a special prize, each entry printed in the Funny Stories Contest will win a free copy of Sara's new book, *Service With A Smile*. The book contains virtually every one of Sara's articles ever written and it is hysterical, a great addition to your locksmith library. (If you aren't lucky enough to win a copy of Sara's book, just send \$14.95 plus \$3 shipping and handling for your own copy.

Ok, guys...that's it for now. Be sure you have been keeping up with your Security Certificate tests. Those are the tests that cover articles printed in the magazine each month. This month, there is a test section in the middle of this issue. Get right on it, and if you have yet to fill in your other tests from past issues, there's no time like the present!

Marc Goldberg

December 1993 • 5

LETTERS

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Safe Company Promotes Business Training

Dear Marc:

May I first congratulate you and your team for providing a quality publication on a consistent basis.

I was inspired to write after reading the interview with Sean DeForest, President of American Lock & Supply Company in your July 1993 issue. I believe what he said was important enough to be the headline article.

Mr. DeForest's vision for a bright future for our industry and the need for the Locksmith/Safe Dealer "to take on the role of the consultant" is right on track.

Hayman Safe Company is convinced that the security industry is poised for tremendous growth. However we feel that the growth will go primarily to the most progressive and far sighted industry professionals.

Never in our history has the future been so bright nor in so much jeopardy. It is bright in terms of the growth that we will see, but in jeopardy in terms of who will benefit from the growth. Business men with marketing experience will take more and more of

the locksmith's business. They will do so by entering the industry and applying the techniques so common to them and so desperately needed in our industry. The knowledge of business methods coupled with sales and marketing skills these businessmen will apply is readily available but practiced by few.

In an effort to help the dealer market themselves, we at Hayman Safe Company and Viri Mullins of LSDA (Armstrong's Lock & Supply) have been providing business training as well as sales and marketing training for years. I have been amazed at how few people attend such training when compared to the attendance of technical courses.

We want our friends in the security industry to not only survive but more importantly to thrive. Our success as a manufacturer is directly tied to their success.

We also agree with Mr. DeForest concerning the need for our industry to network, learn, progress and cooperate with each other. The need has never been greater nor has the reward potential.

This need is especially obvious in the areas of electronics, safes, sales and marketing techniques, merchandising and general business skills.

We add our urgent call, a call for a higher level of persistence, excellence and teamwork in our great industry. The reward potential is enormous for

us all.

Thank you and please keep up the good work.

Don Jenson
Marketing Director
Hayman Safe Co.
Florida

TNL Staff Member Applauded For Service

Dear Marc:

I would like to commend a member of your staff for what I believe to be exemplary service!

I have been looking everywhere for software related to key control, and was told by someone that they had seen an ad for it in *The National Locksmith*. (They didn't know which issue). When I called your publication, I spoke with April and explained what I needed. She was exceeding helpful, even though she had very little to go on. I asked if I could get a back issue of the magazine to see if I could locate the ad.

Today I received the June, 1993 issue, with a note from her to check page 59...she thought this might be what I was looking for. It was! I have since called the source listed for more information.

In this day and age when everyone is in such a hurry and usually quite unwilling to help, it was a pleasure to speak with someone like April. She is a tremendous asset to your staff.

Linda Mantarakis
California



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ASP - Your Auto Service Center for the World

TECHNITIPS

Helpful hints from fellow locksmiths

Send in your tips
and win.

HOW TO ENTER

All you need to do
is submit a tip,
covering any aspect
of locksmithing to
**The National
Locksmith.**



by
Robert Sieveking

Certainly, you have
a favorite way of doing things that
you'd like to share with other
locksmiths. Why not write it down and
submit it to: *Robert Sieveking,*
Technitips' Editor, The National
Locksmith, 1533 Burgundy Parkway,
Streamwood, IL 60107.

Tips submitted to other industry
publications will not be eligible! So get
busy and send in your tips today. You
may win cash merchandise, or even
one of many key machines or code
book sets. At the end of the year, we
choose the winners of the listed prizes.
Last year dozens of people walked off
with money and prizes. Wouldn't you
like to be one of the prize winners for
1993? Enter today! It's a lot easier
than you think.

These Prizes Awarded Each Month!

- All-Lock A 7000 VATS Decoder
- HPC Pistolpick
- Silca Rubberhead Keyblanks (100 Blanks)
- ESP PR-13 Professional Lock Pick Set
- Sieveking Products EZ-Pull GM Wheel Puller
- Fort Lock Backer Board Display Panel

Submit your tip and win!

EVERY TIP WINS "LOCKSMITH BUCKS!"

Yes, every tip published wins a prize.
But remember, you must submit your
tip to *The National Locksmith*
exclusively. Each and every tip
published in Technitips wins you \$25
in Locksmith Bucks! Use this
spendable cash toward the purchase
of any books or merchandise from
The National Locksmith. You will
also receive a Bonded Locksmith
bumper sticker and decal. Plus you
will be eligible for really big prizes.

BEST TIP OF THE MONTH

If your tip is chosen as the best tip of
the month, you will win \$50 in cash as
well as \$35 in Locksmith Bucks! Plus
you will receive a Bonded Locksmith
bumper sticker, decal and a
Locksmith cap. Plus, you may win one
of the annual prizes.

September's Best Tip

Need a 2-1/8" hole, instead of the
1-1/2" hole, for deadbolt
replacement? Replacing an old
National Lock lockset, 1-7/8" hole,
with a lockset that requires a 2-1/8"
cross bore? The solution may be
common knowledge to some, but
news to others. Instead of reaching
for the door jig, it is sometimes easier
to thread the smaller size hole saw
onto the mandrel, inside the larger
saw, as you see in illustration one.
Use the smaller saw to pilot the
larger into the door. The smaller saw
guides the larger one, much as the
1/4" pilot drill would, if the door were
not already drilled. This Technitip
eliminates the possibility of
scratching or damaging the finish of
the door.

Need a 2 1/8" hole,
instead of a 1 1/2" hole?

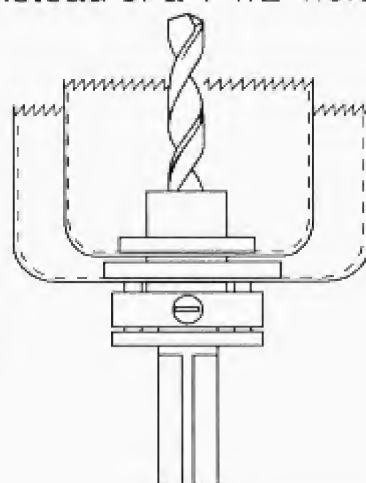


Illustration 1

This Tip works especially well on
metal doors.

Jim Ledford
South Carolina

All-Lock VATS Decoder Winner

As a locksmith, I feel that a part of
my job is to find the easiest method of
accomplishing a particular task.
Recently I was asked to re-connect the
door linkages of a late model auto.
They had been dislodged by a well
meaning but less than professional
non-locksmith. My tip is for the use of
the same tools we use to open autos,
being used to position and reconnect
the linkages. This method will allow
you to reconnect linkage rods and
fasten the lock rod clips without
removing the door trim panels.

Continued on page 10

Continued from page 8

Roll the window up or down, which ever gives you the best view and access to the linkages. Use a high intensity light to illuminate the inside of the door cavity and identify the linkage. Maneuver the linkage into place and fasten the plastic rod clip. using which ever tools lend themselves best to the task. The "Z" tools and some other "gripping" or "binding" type tools are best for moving and positioning the lock rods. You will want to use two tools together, in some cases, but the job is really quite easy.

The last step of this Technitip is

easily as important as the Tip itself. Verify the proper operation of the door several times, to be sure the repair is complete.

Ford 10 wafer door lock linkage dropped when you removed the cylinder to read? Use this method to retrieve and position the linkage back at the hole in the body after making the door key. Good Luck.

Robert E. Temple
South Carolina



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& Service.***

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HPC Pistolpick Winner

This Technitip is for those that are having difficulty loading top pins. Sometimes it can be very difficult to get enough light to the back of a keyway, or get your eye in just the right perspective to see that last pin hole in a six pin cylinder.

Illustration two shows a special follower, with a pin loading slot in both ends. The slot allows the pin and spring to be more easily guided into the top pin chamber. To use the tool, load the cylinder springs into the front three pin chambers only (positions 1, 2, and 3.) Insert the follower from the rear of the cylinder, to align with the

Special Follower eases top pin loading

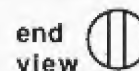
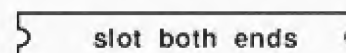


Illustration 2

#3 position. Drop a pin into the groove of the follower, and push it into the upper pin hole with the pin tweezer. Use the follower to guide the pin over the cylinder spring and easily into the cylinder. Repeat this process for the second then first positions of the cylinder. You should have no problem loading the first three chambers. After loading the front half of the cylinder, push the "double ended" tool through the cylinder and load the rear three chambers, using the groove in the opposite end of the follower. Load positions 4, 5, and 6 last.

I hope this method eliminates some of the problems you may have, loading top pins.

Ed Hamm
Illinois

Silca Keyblanks Winner

I have a Technitip that I feel well be of interest to all locksmiths that do automotive work. The new MATS column has been written about in all the trade magazines, but no one talks about how to service these columns without special tools. All that is truly

necessary is a TORX #15 driver. (EKLIND Tool Co. P.N. #22571) The tool is not expanded in the shank, like a regular Torx driver. I have been able to service all those columns that I have run across, using only standard tools and this special driver. After removing the wheel as usual, I use the thin blade Torx driver to loosen the two torx screws retaining the lock plate shield. They can be reached even if the plate is in the way. I then remove the lock plate as usual, using an HPC "SWLPC-1" lock plate compressor. Continue through the column, as you would with any GM auto, to make the key.

To reassemble the column, install the lock plate, shield and retaining ring first. Remove the "U" bracket of the lock plate compressor and use the lock plate screw, with a wrench, to align the MATS plate as necessary to reinstall. Remember, you now have a key, and can retract the locking pin by simply turning the key. Start the car and use the power steering to make positioning the lock plate easier.

I have checked and found that the standard "pin" GM ignition (B&S part number 609530) will work in this column, "in a pinch."

Steve Dubrava
Illinois

ESP Pickset Winner

I have found a unique use for some of those old keys that find their way into the brass scrap box. Clip the

A Second Chance for old or scrap keys



and



Help a "Pet"
find his way home

Illustration 3

blade of the key, as you see in illustration three, and stamp your pet's name on the blank side of the key. Hand stamp your phone number on the tag, to help someone contact you if the pet should stray and become lost. Help a pet find his way home, and use up a couple of those old keys in the bargain.

Chuck Frazer
California

E-Z Pull GM Wheel Puller Winner

This is a Technitip for those

locksmiths that are called on to repair handcuff locks. This Tip will work equally well on most "drill key" or "barrel key" type cabinet and padlocks.

The problem begins when the post, in the center of the keyway, becomes loose or is pulled by an improperly fitting key. This seriously diminishes the security of the lock. Replacing this post can be a difficult task, unless you have a pin anvil or rivet punch.

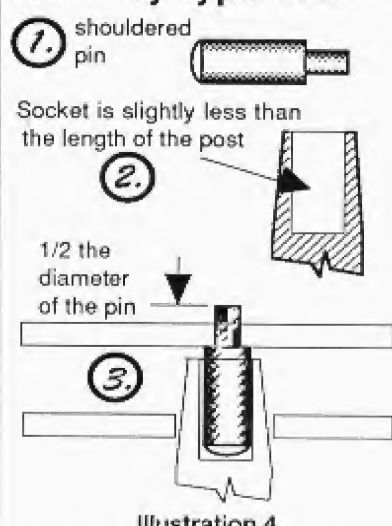
If the drill key post has been lost, you will need to make another. The size and length of the post will be determined by the lock and key. The



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Replacing a Post in a Drill Key type lock.



diameter of the pin, which will be riveted through the back of the lockcase is determined by the size of the hole in the case. The shouldered pin, or post will look like #1 in illustration four. A pin anvil is needed to hold the post upright, while it is being riveted in place. End drill a piece of rod, as you see at #2 in the illustration. The hole in the rod is slightly shallower than the length of the post, and small enough to pass the

keyway of the lock case. With the pin anvil in your vise, and the lock post loaded into the socket of the anvil, the lock case is positioned over the pin. As you can see at #3 of the illustration, the pin portion of the post extends through the lock case by about 1/2 the diameter of the pin. This is a standard dimension for rivet length. With the rivet and lock case in this position, carefully peen the top of the pin to form a rounded rivet head. Test the lock with the correct key.

I have repaired hand cuff locks using this technique, and find that stainless steel welding rod makes a nice rust proof post.

David M. Taylor
Washington

Fort Lock Display Board Winner

This Technitip is a method of servicing a VATS equipped auto, without the aid of a VATS interrogator. You will, however, need a complete set of VATS blanks.

Mechanically remove the VATS ignition from the steering column. With the cylinder out of the column, you can operate the actuator, at the rear of the cylinder hole with a pair of long nose pliers. Insert one of the 15 "uncut" VATS blanks into the VATS ignition, as

it is hanging from the lead wires from the column, and operate the actuator with the long nose pliers. If the car starts, you have found the correct key. If not, wait 5 minutes and insert the next trial key into the removed but electrically connected ignition, and try to start the ignition with the long nose pliers again. Repeat this process until the correct VATS key is found. Read the code on the VATS ignition, which describes the cuts for the correct key, and cut the VATS key for the correct mechanical combination. Assemble the column, and the job is complete.

I'm sure that a VATS interrogator would make the job faster, and to some degree more professional, but the lack of an interrogator should not keep a locksmith from taking a job that would otherwise be left to a dealer. The price is the same, whether you have the interrogator or not. Make the money using this Technitip, then buy an interrogator when you feel the need is great enough. Many thanks to those who have helped me through the contribution of their Technitips.

Rick Kimmer
South Carolina

Continued on page 80



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NEWSMAKERS

New Products and Industry News

New Egress Switching By SDC

Security Door Controls announced today the SDC Sure-Exit, a push sensor exit bar that uses a new concept in access control switching technology.

Unlike capacitance bars which are activated only by human touch, the device releases at a slight contact of anything, including an elbow, hip, briefcase, package, cane or wheelchair.

Sure-Exit features include its operation in extreme weather, from 10 degrees F to 120 degrees F, sensor circuits that are field adjustable relative to the amount of force needed for door release: an armored power transfer loop and 15-foot jacked cable, and an auxiliary output that provides monitoring, local alarm or CCTV activation.



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Shrouded Padlocks From Federal Lock Co.

Federal Lock Company introduces shrouded protection 200P and 300P Series padlocks. Featuring Federal's exclusive design of all side coverage of shackle, high vertical clearance of shackle in open position for ease in application and low locked vertical clearance of shackle for maximum protection against attack.

Standard features included: 2"/50mm and 2-1/2"/63.5mm wide hardened solid steel lock bodies, quality chrome plating, double ball locking mechanism, hardened alloy shackle, rekeyable and interchangeable 6 pin brass cylinder with first position top and bottom pins of stainless steel to resist drilling and heavy duty solid steel cylinder cover plates which barricades cylinder from destructive entry.



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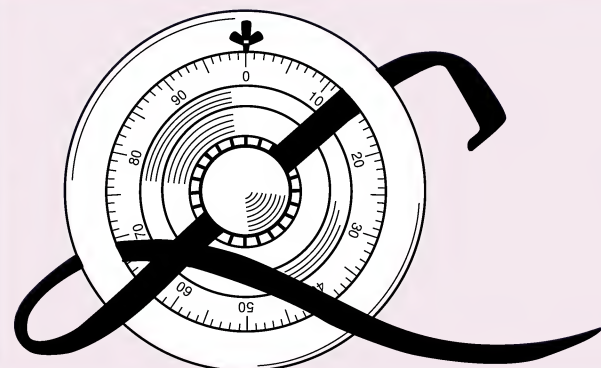
Weiser's White Enamel Finish

White enamel finish and bright brass can add a distinctive look to leversets and knobsets, and this combination is now available from Weiser Lock. As shown, the white enamel finish provides an exceptionally clean and elegant look for both classical and contemporary styles, offering homeowners a unique alternative for decorating or remodeling projects. Complemented by bright brass, the white enamel finish is suitable for any door in the house, and lends the subtle appearance of a professional decorator's touch.



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Continued on page 16



**Lockmasters has a 44
year history of training
security professionals.**

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Continued from page 14

Von Duprin Introduces Pneumatic Exit Device

For exit device installations that require remote unlocking ability but are located in hazardous areas, Von Duprin has introduced a pneumatic exit device provides the same capabilities as standard electrified devices, which cannot be used in hazardous locations.

The pneumatic devices are available on Von Duprin rim, mortise, concealed vertical rod and surface vertical rod pushpad devices. The air cylinder used in the devices has a special actuating linkage that allows a mechanical override option to pneumatic locking and locking. Dogging can be mechanical, by hex key, or by pneumatic solenoid, which holds the push pad down.



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Mortise Lever Conversion Kit By Yale

Yale Security Inc. has introduced a mortise lock retrofit kit, designed to convert knob trim to lever handle trim to meet requirements of the Americans With Disabilities Act (A.D.A.).



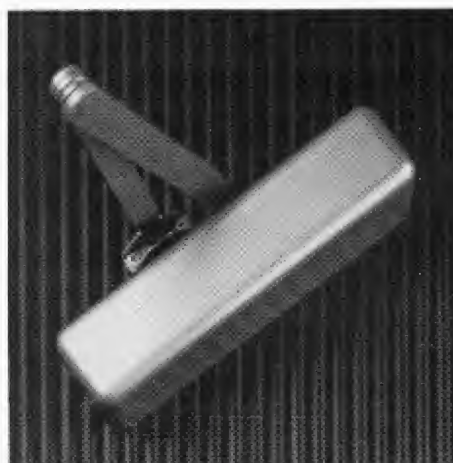
The Yale 87FL Mortise Lock Retrofit Kit contains all the internal components necessary to convert Yale mechanical and electrified mortise locks from knob to lever trim.

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Dorma 7800 Series Closer

Dorma Door Controls Inc. has introduced a new 7800 Series surface closer line with adjustable spring power that meets accessibility code requirements.

The closers can be tailored to suit the individual requirements of both interior and exterior doors, allowing them to attain optimum closing force while remaining below the barrier-free opening force requirement.



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Major

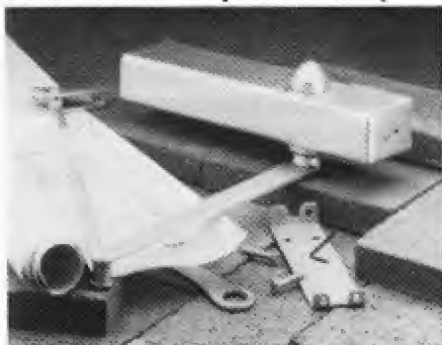
MANUFACTURING, INC.

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Enhanced Corbin Closers

Corbin Russwin Architectural Hardware announces the addition of several enhanced options to their mid-priced Series DC3000 Door Closers. These additions include four arm/mounting options as follows: Heavy Duty, Heavy Duty with Hold Open, Reversible Backstop, and Reversible Backstop with Hold Open.

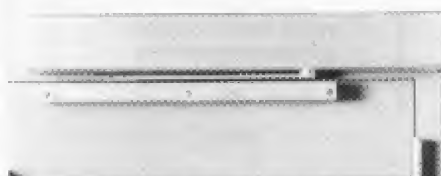


Beginning in August of this year, a Delayed Closing feature will also be offered with this family of Closers. This provides A.D.A. compliance by delaying the closing of the door for an adjustable period of time.

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Norton PowerMatic Door Control

Norton's PowerMatic Series door controls meet the needs for barrier-free door control. A variety of choices are available to meet virtually any architectural barrier code requirement.



The Norton PowerMatic Series 6600 utilizes external switches or scanners for activation. The Series 6700 has an integral switch mechanism that automatically activates with a slight movement of the door toward the open position. This movement is adjustable between 3/8" and 1-1/8" (9.5 to 29mm) in the direction of opening.

Both Series 6600 and 6700 are available in a "power assist" or a "power operator" function. In the "power assist" function the door control operates as a standard door closer unless activated.

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Taco DX50/DX80 Door Closers

Trans-Atlantic Co. announces their DX50 and DX80 Series trimline surface door closers. Both models have full rack and pinion and are reversible. Their heat treated spindle and high tensile steel compression springs are designed for the rugged demand of exterior doors. These closer models carry the U.L. and U.L.C. and also carry the best warranty of any imported closer available. This warranty is for ten years against any mechanical or constructional defects. The DX50 and DX80 series closers come with two non-critical valves for closing and latching speeds and are available with a fully adjustable back check feature.

The DX50 series closer is their standard surface model closer. The DX80 series deluxe closer is offered with a full metal cover that comes in aluminum and duronodic. The DX80 series closer is also offered in mirror-like brass or chrome finish.

These closers offer any commercial door a rugged, trouble-free, efficient unit with proper full size door closing power.

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HIGH SECURITY LOCKS

**The market leader
in locking systems for security,
safety, and control.**

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Lock Hardware Cross Reference By Dalax

Dalax, Inc. has released their new "Lock Hardware and Panic Exit Device" Complete Cross Reference book. This comprehensive publication consists of 217 pages, with over 33,000 product line items from 66 manufacturers. The comparisons are based on the guidelines set forth by ANSI and are categorized as "or equal" and "or substitute" basis. They are also grouped and compared on cost value.

Products include cylindrical, mortise, unit, interconnecting, auxiliary

locks and panic exit devices. Both function and trim consisting of knobs, levers, pulls, etc., are featured. In addition, miscellaneous locks, such as cabinet and drawer locks, padlocks and electric strikes, are included.



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Xtronic 3000 By Corkey

Corkey announces the Xtronic 3000 Hotel Guest Room Lock. The Xtronic 3000 is a card operated completely mechanical guest room lock with full hotel function capability. Codes are changed automatically with each new card insertion. The Xtronic 3000 installs in existing cylindrical lock door cut-out. Requires no batteries, electrical connections or computer interface. And meets or exceeds all A.D.A. specifications. An optional 1" tubular deadbolt interconnected to the latch for single action exit is available.



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Parker Grade 2 Lever Set

It's the law! The Americans with Disabilities Act (A.D.A.) mandates that every public and commercial building be accessible to the disabled. There are millions of doors that still require retrofitted hardware installed to avoid possible litigation. S. Parker carries a comprehensive U.L./A.D.A. product line.

Their most popular A.D.A. item is their grade 2 heavy duty cylindrical key-in-lever sets. They conform with ANSI, A156.2 Series 4000. Available in entry, passage, privacy, storeroom, classroom, dummy and less cylinder functions. Accepts Lori, Ilco, Medico, Corbin, Russwin, Kwikset, Sargent and other leading keyways (up to 22).



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Test Article #25

**GENERAL
SECURITY**

To be tested in
September '93 issue
Details in front of issue

AMERICAN DEVICE RIM DEVICE

*"This is part of our security Certificate Program.
In the current issue, the content will be tested."*

This article reviews the installation of the American Device 6308 rim exit device with thumb piece and classroom function. (See photograph 1.) This particular unit has a gray enamel body and stainless steel push pad.

Although other finishes are available, stainless seems to present itself as a good material for areas of high traffic and rugged use. The unit in this installation was being prepped for a pair of Ceco Medallion doors with mullion at a local high school, typically a good indicator of the equipment's reliability.

While most installations are done in the field, we were able to watch the prep work being done before the installation of the door and frame. While this may seem backwards to us locksmiths, there are some advantages in this method. Photograph two, for example, shows the door before being prepped. Lying on large I beams, the door is easily maneuvered for measuring, drilling and attaching the hardware.

The first rule in prepping a door for hardware is to follow directions and use the templates. If the holes are drilled in the correct place at the correct size, mounting the hardware is nothing more than installing the screws that hold the unit to the door.

The first dimension laid down is the horizontal centerline of the exit device. This line is drawn to assure that the device is mounted squarely to the rest of the door and frame. Where two devices are being installed on a pair of doors, these lines assure that both units are mounted at the same height and are level.

In photograph three, Rich Prosek measures from the bottom of the door to the horizontal centerline of the device. After marking this distance at both edges of the door, a line was drawn across the door to make the whole line visible.

The next line to be drawn is for the



1. The American Device 6300 rim device (less the cover in this photograph) has a projection of 2-7/8" from the face of the door.



2. Working inside on a flat surface sure made this job easier.



3. Rich makes the first of the centerline measurements.

backset of the device. (See photograph 4.) A few factors affect what the actual backset needs to be. Three of the



4. Then the backset is measured.

most common are the height of the door stop edge and, in a pair of doors, the mullion specifications, and the strike style specification.

Two of the most common door stop heights are 5/8" and 1/2". The 5/8" is fairly standard on steel frames, while the 1/2" is more common among wood and aluminum frames.

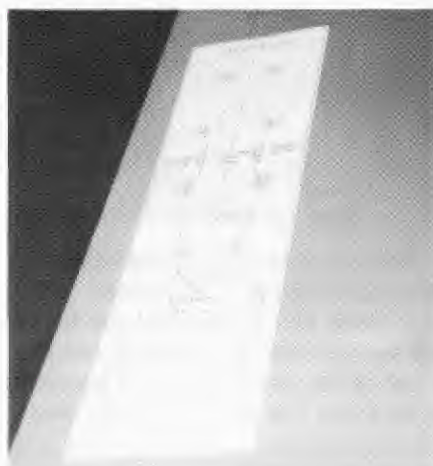
Mullion styles and dimensions also must be taken into account as they will affect exactly where the device must be mounted. The American Device #1300 mullion requires a 3" backset, for example. While the American Device #F1300 demands a 3-1/4" backset. Mullions from differing manufacturers will affect the backset measurement and must be accounted for.

Also affecting the backset dimension is the projection of the strike from the frame. Different applications may require the use of specialized strikes and the proper backset measurement must be taken into account.

On a single steel door with a 5/8" door stop and using a standard strike, a 2-13/16" backset is standard for the American Device unit. The door in this installation, however, is being used with the American Device #1300 mullion. This mullion requires a 3" backset. Had the specifications for a

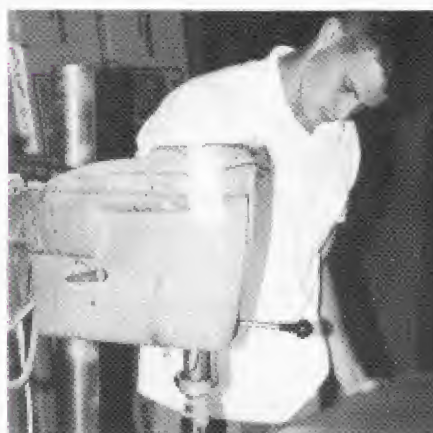
standard installation been used, this device would not have worked once mounted.

With the starting dimensions drawn, lay down the correct template for the trim package that is being installed. (See photograph 5.) For a standard exit only device, this is usually quite simple as the mounting holes are the only ones to be concerned with. But if exterior handles, knobs, levers, pull handles, etc. are added, concern must be made for marking and drilling, or cutting the correct holes, the correct size, in the correct place. The template has all of this information.



5. Use the template to make sure the correct holes are cut the correct size and in the correct place.

After marking with the template, Rich drills pilot holes through the door. (See photograph 6.) The nice thing about using a drill press is that the holes are drilled squarely through both sides of the door. As a locksmith I have always done this free-hand with a regular drill. When the holes from the inside of the door don't line up with the holes on the outside,



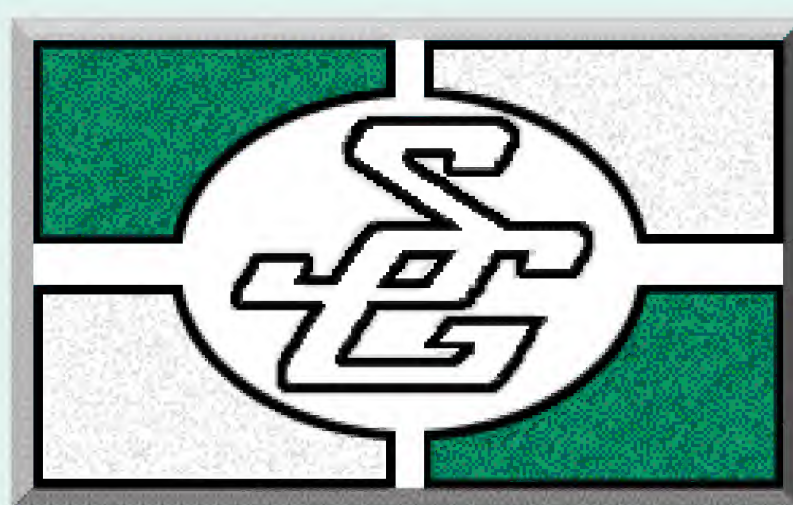
6. A luxury we don't have in the field, using a drill press to keep the pilot holes square.



7. Using the large drill to...



8. ...cut the final holes.



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mounting the hardware becomes difficult. Drilling pilots first allows for adjustments before the final hole or cut is made.

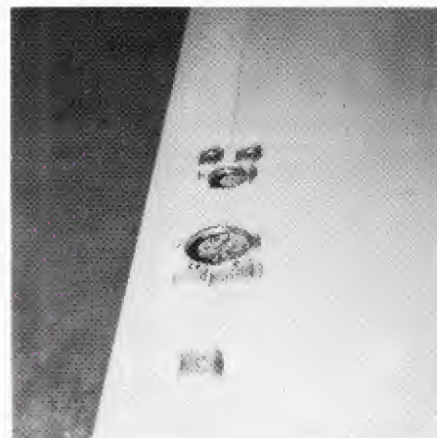
Using the pilot holes, Rich uses the correct size drills for the trim. (See *photographs 7 and 8.*)

After drilling the holes, the door is ground to remove the burrs and then repainted. (See *photographs 9, 10 and 11.*)

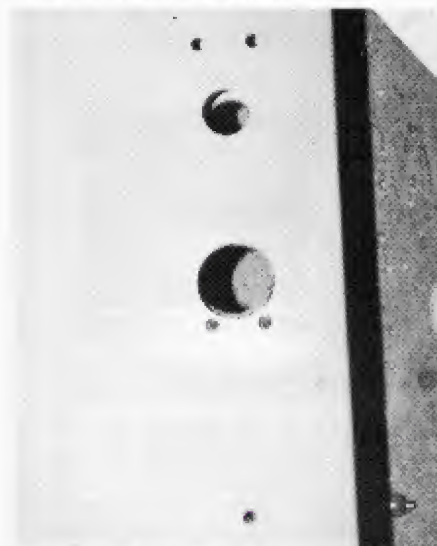
With the door prepped, the hardware is now installed. (See



9. Grinding the burrs from the door holes.



10. With the burrs removed...



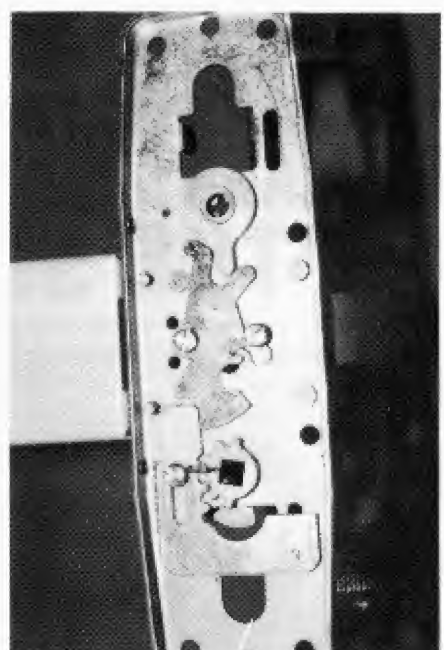
11...it was time to paint.

photograph 12.) The classroom function of this device requires that the unit be in the locked position before placing it on the door. This is to make sure that the locking cam and rim cylinder are correctly timed. (See *photograph 13.*)

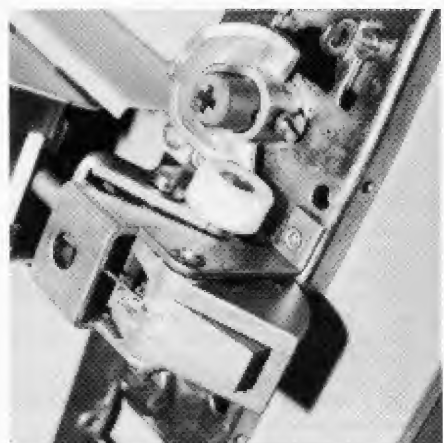
Unlike many rim devices the deadlatch for the American device is part of the latch itself. As seen in *photograph 14*, the small latch in the center is actually the deadlatch. When the deadlatch is *not* depressed the



12. Putting the exterior trim into place.



13. This function requires that the unit be locked so that the lock cam and the rim cylinder are properly timed.



14. The unique deadlatch design makes strike alignment easy.

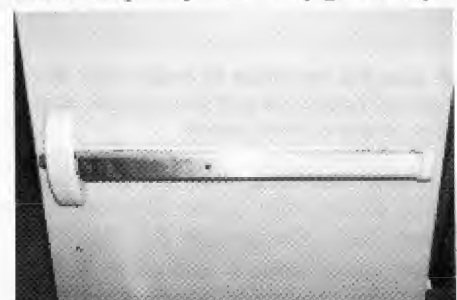
unit is deadlatched. Having the deadlatch in this position makes strike alignment easier because there is no need to worry about the deadlatch ramping onto the strike properly. This positioning will also check future strike alignment problems should the door start to shift.

Once the head and trim have been attached, it's time to move to the back of the rim device. Here it's simply a matter of aligning the device to the centerline and attaching the end bracket. (See *photograph 15.*)



15. Installing the back mounting bracket.

With everything securely mounted the installation is complete. (See *photograph 16.*) In this case the strike will be mounted in the field, but the brunt of the work was easily handled in the shop. Boy have they got it easy!



16. The device mounted!

Thank you to Unidor of Addison, Illinois for allowing us to photograph the installation. (See *photograph 17.*)



17. From Unidor in Addison, Illinois (left to right): Don Prosek, Rich Prosek and Mike Friari.

Test Article #26

AUTOMOTIVE SECURITY

To be tested in
September '93 issue
Details in front of issue

FIVE MINUTE CAVALIER IGNITION KEY

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In the current issue, the content will be tested."*

In the few short years of its use the cylinder by Alpha Technologies (Alpha Tech) has been one constantly followed by complaints of inconsistent tolerances, key breakage (on the early version, anyway), and the inability to service. Probably the single biggest aggravation for the locksmith, however, is generating a key for this lock.

Since 1991 the Alpha Tech ignition has been used in the GM "J" and "N" body vehicles. These include the Chevrolet Cavalier, Oldsmobile Achieva, Buick Skylark, and Pontiac Grand Am. And even though 1994 and 1995 marks the end of General Motors use of this ignition, the problems will continue until the last one is laid to

rest.

To date, there are five methods for making a key for this vehicle: reading the wafers, drilling for the side bar and impressioning, disassembling and reading the wafers, tryout keys, and ignition replacement.

By far, reading the lock is highly recommended. Using this method leaves the ignition cylinder and its housing unaltered during the process. Thus, there is little room for customer complaint should the ignition ever fail or cause problems.

The unfortunate part of reading this particular lock, however, is that it is not always easy to read. The positioning of the Achieva dashboard, for instance, leaves little room for the

head and/or an otoscope to obtain a straight and clear view of the tumblers. Also making it difficult is the dust cover lever at the front of the keyway. This armature forces the plug back into the cylinder when a key is inserted. When trying to read the wafers, however, it simply serves as an obstacle. And, of course, there is the problem that many locksmiths have, including this writer, in not being proficient at reading locks.

Tryout keys from this writer's experience have only shown to be fifty percent reliable. This record is due to the nature of the lock, however, and not the quality of the tryout keys.

Any other method of key making

Continued on page 26



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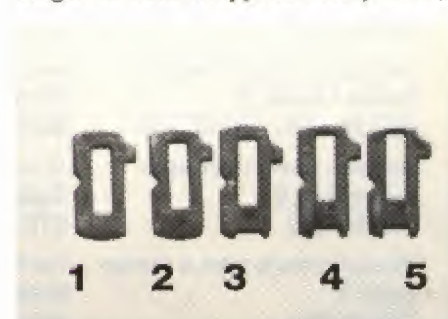
requires removing the steering wheel and column shroud, and generally takes 30 to 40 minutes to complete. These methods are usually not money makers.

Now, while not all methods and tools are perfect, we are always looking for faster and better methods for accomplishing a sometimes difficult task. So, for this article, this writer had the opportunity to try a new set of depth finding keys by Saber Tool Company. The set, called the Alpha-Cracker, includes four keys that are inserted into the keyway of the ignition and allow the locksmith to determine the depth of each tumbler in the lock.

Without previous experience in using these keys, this writer was able to make keys for three separate Alpha Tech ignitions in an average of seven minutes each (the longest taking 10 minutes). This included one brand new ignition that was taken straight from the box. But before we explain how the keys are set up and their use, let's first examine the makeup of the Alpha Tech ignition plug and wafers.

The Alpha Tech ignition is a double sided, sidebar lock that uses six spaces and five depths. The plug is set up to accept six staggered tumblers with the sidebar located at roughly the 9 o'clock position. Looking into the keyway, tumbler positions 2, 4, and 6 come down from the top. Positions 1, 3, and 5 come up from the bottom. The plug is approximately .620" in diameter.

The tumblers are unique in this lock. (See photograph 1.) None this writer observed had the depths stamped on them. Tumblers 1 and 2 are identical in size and shape. The notch on the sidebar are in the same positions as well. The difference in the depth is obtained by moving the position of the keyway. The tumbler height of both is approximately .584",

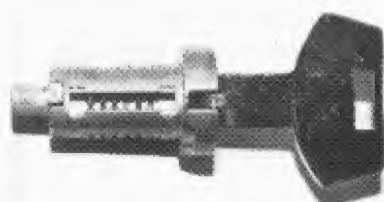


1. The wafer tumblers of the Alpha-Tech ignition are unique, varying both in height and shape.

Continued on page 28

Continued from page 26

significantly smaller than the plug. The reason they are smaller is to accommodate the increment difference between the 1 and the 2 tumbler when a key is inserted. When a correctly cut key is inserted, the sidebar notches of both tumblers line up at the sidebar. Due to the positioning of the keyway hole of tumbler 2, however, the bottom of this wafer drops below the bottom position of the 1 wafer. If the tumblers' heights were identical to the plug diameter, the 2 wafer would find itself extending into the tumbler ward, beyond the shearline. (See photograph 2.)



2. The plug with the 2 and 3 wafers in spaces 1 and 3. Cutting a key to a 3 depth for both spaces shows that both tumblers line up at the plugs shearline, but the notches for the sidebar are not aligned correctly.

Really different are tumblers 3, 4 and 5. While wafer 5 is roughly the same height as wafers 1 and 2, wafers 3 and 4 are markedly larger. Their heights are approximately .605", slightly smaller than the plug. The sidebar notch of the 3 wafer is different than all the others, and the sidebar notches for wafers 4 and 5 are the same.

Most noticeable, however, are the notches at the bottom wafers 3, 4, and 5. The height of this notch is the same for wafers 4 and 5, with wafer 3's notch approximately .020" shallower. As far as can be seen these notches straddle a rib on the bottom tumbler ward in the cylinder.

Now, the magic here is to understand the positions of the tumblers in the relaxed state. This is when the wafers can be sight read looking into the keyway, and when the depth finding keys are used. In most locks the wafers can be read by simply comparing their position in relation to a reference point in the keyway, usually a groove.

For the most part, this is true when reading the Alpha Tech ignition. However, what is found is that because of the varying dimensions of the wafers, at the point that rests on

the key, tumblers 2 and 3 are only roughly .008" different! (See illustration 3.) Sight reading this difference can be difficult, but not impossible. And it is this minute difference that changes the shape of the Alpha-Cracker depth finding keys.

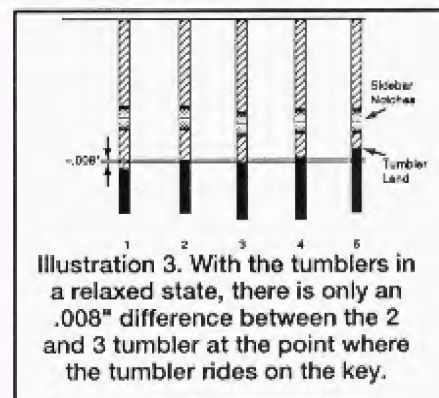


Illustration 3. With the tumblers in a relaxed state, there is only an .008" difference between the 2 and 3 tumbler at the point where the tumbler rides on the key.

As stated earlier, there are only four keys. (See photograph 4.) Once the user is proficient at using these keys, only three need actually be used. With the exception of what is labeled the 2/3 key, each key is used to find the designated depth. The 1 key finds the 1 depths, the 4 key finds the 4 depths, and the 5 key can be used to confirm the 5 depths, although

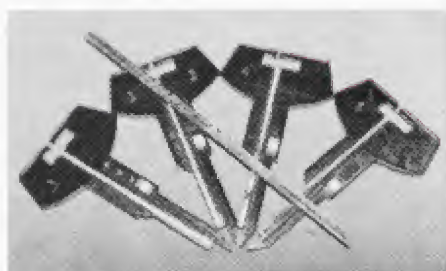


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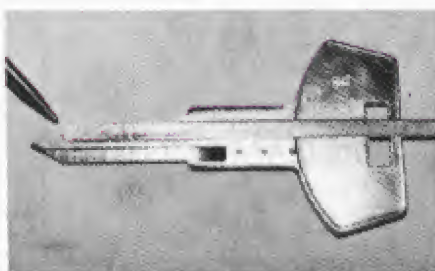


4. The Alpha-Cracker depth finding set comes with four keys.

it may not be necessary. The concept behind these keys is that the shallowest depth key to slide below a wafer is that wafer's depth.

For example, the 1 key will slide below all tumblers that have a 1 depth, but stop at all depths deeper than 1. The 2/3 key will slide below all the 1, 2 and 3 depths but stop at the 4 and 5 depths. The 4 key slides below all depths that are 4 or shallower and is stopped by the 5 depth. The 5 key, while not always necessary, slides under all wafers that are 5 or less in depth. (See photographs 5 and 6.)

The reason for including the 5 key is to make sure that the user is inserting the keys squarely into the keyway. If the key is tilting up or down, the key will be stopped by the wafers, indicating that the insertion was not square. If the key slides

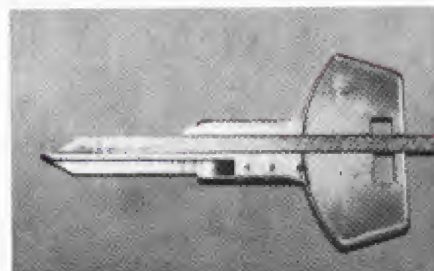


5. This flat spot in the key prevents it from passing under tumblers that are deeper than a 1 depth.

untouched to the end of the keyway, the key is inserted correctly. At this point the user can visually gauge at what position the key must inserted to be square.

The 2/3 key is special in that it tests for both the 2 and 3 depth. As stated earlier, the difference in these two depths is only .008". And due to the sloppy tolerances of the plug's keyway, separate keys could not be made to assure that the wafer was a 2 or a 3. When using this key, the depth of the tumbler may be either a 2 or a 3.

Using the keys is quit simple. Working on the top tumblers first, spaces 2, 4 and 6, insert the 1 key. Make sure that the key is perfectly square to the keyway. Tilting it up or



6. This small metal piece is used to lift front tumblers out of the way so the next one can be read.

down may cause incorrect readings. Applying even pressure to bring the uncut side of the keyblade in contact with the plug helps keep the key square. (See photograph 7.)

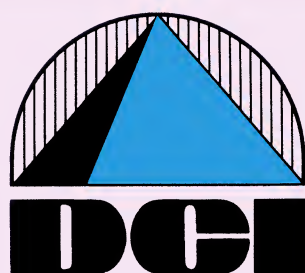
At the side of the key there are three index marks to show which space is being measured. Move up to the first index mark (space 2) and push the key into the lock. If the key slides past the index mark then that tumbler is a 1 depth. Write this number and depth down on a simple key chart. If the key stops at that index mark then the cut is deeper than a 1 depth.

Push the key up to the next index mark (space 4). (If the key stopped at the first index mark, insert the tumbler slide to raise the first wafer



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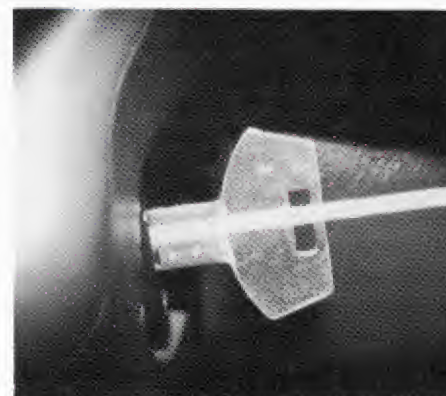
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7. The Alpha-Cracker key doing its job. Notice the index marks on the side showing the space that is being measured.

out of the way.) At space 4 if the key slides under this tumbler it is a 1 depth. If it stops, it is deeper than a 1 depth. Proceed to the last or 6 space and check its depth using the 1 key. Again, if the key stops the cut is deeper than a 1 depth.

Now move onto the 2/3 key. Using the same process, check to see which tumblers the number 2/3 key clears. Remember! If the key does not slide beneath the tumbler, then the tumbler depth is deeper than the number marked on the key. All tumblers that slide beneath the 2/3 key may be either a 2 or a 3 depth!

Use this same procedure using all the keys for both sides of the lock. Remember that cuts 2, 4, and 6 are on the top, 1, 3, and 5 are on the bottom.

When complete, the user will have actual depths for each tumbler except for those that accept the 2/3 key. In this case there are two methods to finding whether the depths for these tumblers are a 2 or 3 depth. In most instances the depths can be determined by applying the GM rules for spacings and depths.

1. When added together, the cut depths equal an even number.

2. Adjacent cuts cannot be more than two increments apart.

3. The same depth never occurs in more than three consecutive cuts.

4. There are never more than four cuts of the same depth.

The second method is to cut a key using the depths that have been found. Cut the spaces that are 2/3 to a 2 depth and file to a 2-1/2 depth (use the file to dress these cuts for impressioning). Insert the key and tap the head with an impressioning mallet while applying turning pressure. Tap on the top and bottom of the key head

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Test Article #27

**ELECTRONIC
SECURITY**

To be tested in
September '93 issue
Details in front of issue

BASIC ELECTRICITY, PART I

*"This is part of our security Certificate Program.
In the current issue, the content will be tested."*

To date we have covered the components or parts to an access control system and the roles they play, the physical and electrical properties of the electrical hardware, and the door and frame specifications needed for installing the electrical hardware. What we haven't covered thus far, however, is the means by which these systems operate electricity!

Electricity is not some mysterious, unpredictable phantom. It is a very controllable form of energy. And, because this energy is understood and can be controlled, it is used to perform work. But, just like any form of energy, there must be a way of properly producing, storing and directing it. This is where an understanding of electricity's characteristics become crucial. It is with this knowledge that the proper means for producing, storing and utilizing electrical energy can be created and used.

For example, I bet the first caveman to use a bull to pull his plow didn't just wake up, run out to the field, strap a cow to his plow and say "GO." Now, while I'm not a historian or scientist, it is probably much more likely that our primitive farmer probably studied, to some degree, the bull and devised means and tools to control the beast first.

I'm also pretty sure that the first and subsequent tries weren't all that successful. He probably found himself, more than a few times, facing an angered, charging bull, wondering what the heck he had been thinking to get himself into this situation. But each time he failed and tried again he learned more about the bull and what it would take to harness and utilize the bull's power.

Electricity isn't any different. (If not handled correctly it can knock you on your tail end as easy as any bull can.) By understanding it, we can devise tools, materials and methods to use its great power. Fortunately, our forefathers were the ones to grab the bull by the horns and detail for us some of the characteristics of electricity. This has left us only with the task of finding different means for utilizing electricity based on its characteristics.

Like our farmer and his bull, if electricity is misused or abused, someone is going to get hurt or something damaged. If treated properly, the work it yields can be very profitable.

The next few articles, then, are going to cover some of the basic characteristics of electricity and some to the ways it can be measured. We will cover the tools for detecting and measuring electricity. We will better

cover power supplies, wire and cable, and switches and their specifications and applications.

In The Beginning

The beginning of our study on electricity should probably begin with the atom. It is here that the elements or parts that create the force known as electricity probably exist.

The core or the center of the atom is called the nucleus, and it is here that most of the mass of the atom is concentrated. The nucleus is made up of two particles: the protons that are positively charged particles and the neutrons that are electrically neutral.

While most of the weight of the atom is contained within the protons and neutrons of the nucleus, around this core whirls or orbits much smaller particles called electrons. These particles are negatively charged.

Normally for every proton (each with a positive charge) there is an electron (each with a negative charge). Because these two charges offset or balance one-another, the atom has no charge. (See illustration I.)

Now, when we take a conductive material, such as copper wire, and apply an electrical force to it, the electrons in the outer orbit, or furthest

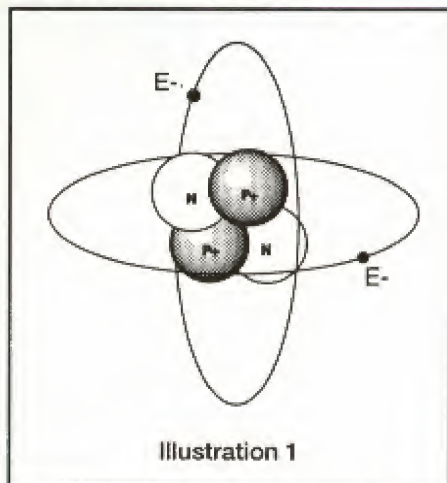
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from the nucleus, of the copper atoms are forced out of their orbit and are moved or impelled along the copper wire. These moving electrons are called free electrons and are so loosely bound to the protons of a nucleus that they are relatively free to move from one atom to the next.

To better grasp the concept of moving electrons, imagine a hose filled with marbles. As a marble is shoved into one end of the hose, a marble on the other end is forced out. Likewise the electrical energy applied to the end of a copper wire forces the free electron from one atom to move

and force over the free electron from the atom next to it. This movement is transmitted through the entire length of the conductor.

Given an equal amount of electrical force, different materials may permit for a different number of moving electrons. Materials where the electrons break easily away from their orbits, permitting greater numbers of free moving electrons, are good conductors and are said to have a low resistance to electron flow. These materials, usually metals, require very little electrical force to get electrons flowing.

Materials that demand a high amount of electrical force to break the electrons away from their orbit are said to be highly resistive, do not conduct well, and are called insulators. Plastics, rubber and glass are typical insulators.

Regardless of the material, you will notice that there are three factors involved in electron flow: electrical force, the quantity or flow of free electrons, and resistance. It is these very characteristics that must be measured or determined before materials, tools and methods can be used to control and use electricity.

These three forces are measured in terms with which I'm sure you are familiar. The electrical force is measured in volts; the flow of electrons is measured in amperes or amps, and the resistance is measured in ohms. A thorough understanding of these fundamental characteristics are the basis for understanding electricity.

Following are the meaning and descriptions of each characteristic:

Voltage

Voltage is the amount of pressure applied to the electrons in a given system, it is what forces electricity to flow through a circuit. When we look at the electrical specifications of the access control system or electrical hardware system we often see the voltage labeled by "Volts" or the letter "V." In electrical theory, however, voltage is designated by the letter "E," standing for "electromotive force."

To better illustrate what this measurement is describing, imagine a large dam. At the bottom of the dam is a portal or hole allowing water to flow through. During the dry months of summer the water behind the dam stays relatively low. At this time the pressure forcing the water through the hole is also low.



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As the rainy seasons approach, the water behind the dam increases. As the water level increases, so does the pressure on the water going through the portal.

While the pressure for water may be measured in pounds per square inch and air in inches of mercury, electrical pressure is measured in voltage or volts for short. (See

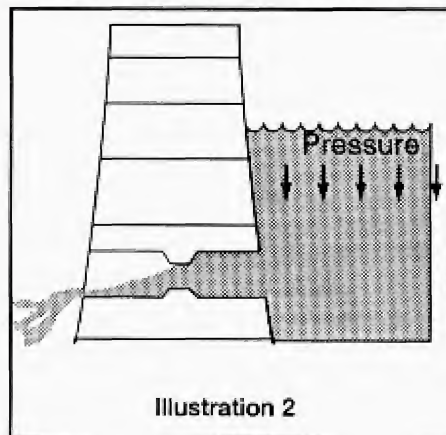


Illustration 2

illustration 2.)

Amperes

Referring back to the dam, we find that the portal is designed to allow a certain quantity of water to flow through every hour in order to keep the land below the dam from flooding. When we measure this flow we find it to be 10,000 gallons per hour.

Like the water in the dam, electrons also flow. Electron flow is called current. And, like the water passing through the dam, current is also measured. But instead of using gallons per hour, or gallons per minute, current is measured in amperes or amps. While most of the electrical equipment uses the term "amp" to designate its amp rating, in electrical theory current is designated by an "I" coming from the word "intensity."

Resistance

Again, referring to the dam, the amount of water allowed through the portal is determined by the diameter of its opening or its aperture. When it is desired to allow large quantities of water pass through the portal, the aperture is increased. This, of course, means that there is less resistance holding the water back.

When a smaller quantity of water is supposed to pass through the portal, the aperture is constrained, causing resistance against the flow of water, slowing the flow. (See illustration 3.)

Electron flow, too, is subject to resistance. Some materials conduct

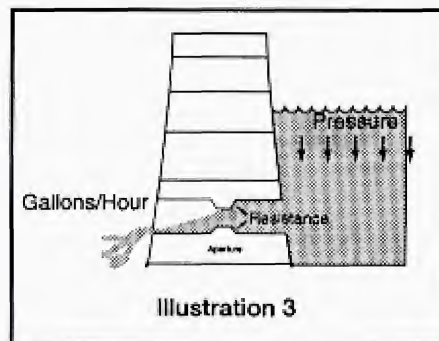


Illustration 3

electrons very well. These materials have low resistance. Some materials do not conduct electrons. These materials are very high in resistance.

In electrical applications, resistance may be desired or it may be unwanted. The circuitry design of circuit boards regulates the current and voltage through the use of resistors and other components to achieve a working device. This use of resistance, of course, is planned and desired.

On the other hand, the resistance caused by corroded wiring or switch contacts, or incorrect wire thickness or switch size may lead to electrical components that do not work, or wiring or switches that could become hot to the touch, or even melt and burn. This is not a proper application of resistance, and is the very reason locksmiths should understand the basics of electricity before attempting electrical installations.

The electrical equipment we use will list the resistance using the term "ohms" or the symbol Ω . In electrical theory the letter "R" designates resistance.

Ohm's Law

Well, we've looked at three different characteristics of electricity. But how do they relate to one another?

As before, return to the dam example (no pun intended).

On any normal day the water level is at 15 feet, the portal is opened up to half its diameter, and the water flows through at 10,000 gallons per hour.

Now, suppose a heavy rain raised the water level to 25 feet. How does this affect the other factors surrounding the dam?

Well, with the water level increasing, the pressure against the water going through the portal also increases and, in turn, the flow of the water as well as the resistance through the portal increases.

Instead, suppose the water level drops below normal, to the 5 foot

level. What happens now? That's right, both the flow of water and the resistance decrease. The characteristics of electricity are much the same and the value for each can actually be determined using an equation called Ohm's Law.

In short, Ohm's law states that E(voltage) is equal to I (amperage) multiplied by the R (resistance). The formula looks like this: $E=IR$.

In this particular arrangement of the equation we are looking for the voltage. By rearranging the formula we can solve for either the amperage or the resistance: $I=E/R$ and $R=E/I$.

As can be seen, knowing any two values for this formula allows us to find the third value.

For example, if we have a 12 volt electric strike that draws a current of .75 amps, what is the resistance of that strike's coil or solenoid? Using Ohm's Law, we can find the resistance: $R=E/I$.


The voltage (E) is 12, the current (I) is .75. Therefore, the resistance is equal to $12/.75$ or approximately 16 ohms.

Before we finish this article there is another specification that we often see on electrical components and hardware, that is the "watt." The watt represents the rate at any given instant at which work is being done in moving electrons. In essence the watt indicates the amount of power needed for doing work at any given instant. In electrical theory, the watt is represented by the letter "P," and is equal to the voltage multiplied by the current or $P=EI$.

Like Ohm's Law, knowing any two of these values allows us to find the third. For instance, if we have an electric device that is 3.6 watts and 24 volts, we can determine the amount of current the unit needs by simply rearranging the equation.

Because we know the power (P at 3.6 watts) and the voltage (E at 24 volts) we can solve for the current (I). To do so, we move the equation to solve for the current: $I=P/E$ or $I=3.6/24$. Thus, I equals .15 amps.

Conclusion

Ohm's Law gives us the groundwork for understanding how to use electricity. Carefully study and memorize the different variations of Ohm's Law. Next month we will use Ohm's Law to help us determine the compatibility of the power supply, wiring and strike for differing installations. 

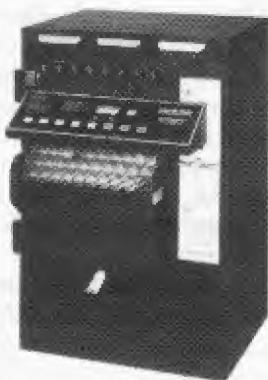
PRODUCT REVIEW

SAFES AND SAFE PRODUCTS

In this section you will find a number of products by various safe manufacturers. As a locksmith, you offer security of many kinds. Many of you already handle safes; some of you do not. However, almost all of you know that selling safes can be a profitable experience for a locksmith company. Use the Rapid Reply card in the rear of this issue to request more information on any of the items interesting to you.

Allied Gary's Cash Controller

Allied Gary International introduces its line of autobank cash controllers. Well suited for the convenience or retail market, the Autobank is designed to control access to large quantities of ready cash. With several models available, some options include: color coded drop drawers and depository containers, employee PIN control system and audit trail, inner safe for maximum security.

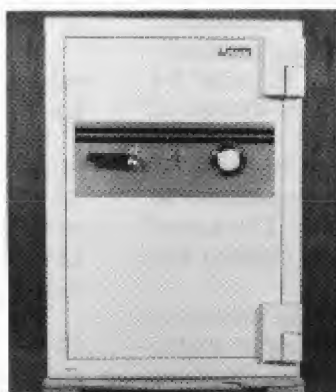


Maintenance is simple with the electronics mounted behind the door for easier service access and free technical training offered at the Waynesboro, Georgia plant.

For FREE Information
Circle 265 on Rapid Reply

Ambassador Safes Super Strong Series

Ambassador Safe Company introduces the Model BA-910, the baby of the Super Strong Series Safes which are the latest generation tested U.L. Listed



TL-30 safes.

The BA-910 gives you thirty minutes of tool resistance against attack from power and conventional tools. Other standard features of the BA-910 include: Minimum one hour fire protection, six-sided burglary protection, extra heavy duty construction, massive four-way locking bolts, and sophisticated locking features.

The BA-910 is suited for home or office use because it can protect large amounts of cash, jewelry, stamp and baseball card collections, and other irreplaceable personal items without worry.

For FREE Information
Circle 266 on Rapid Reply

AMSEC Adds Burglary Option

AMSEC's fully galvanized home and office record safes are now available with fire and burglary protection. The new commercial record safes are equipped with an interior "B" rate chest utilizing the "DS" series three way boltwork with 1/2" solid steel door.



For FREE Information
Circle 267 on Rapid Reply

Bonafide's Dual Compartments

Perma-Vault's patented Model PRO-1200M Dual Compartment Cash Protection System from Bonafide Factory Products consists of one PRO-1201-M outer unit and one PRO-1202-M inner unit. The inner units can be exchanged for convenient transfer to a counting room or to a cash pick-up service.

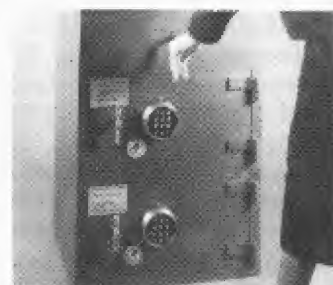


Perma-Vault's restricted keyways protect against unauthorized key duplication, the safe is virtually pick proof; keys are removable only in a locked position and custom key control systems can be designed to your specifications: masterkeyed, keyed alike or keyed different.

For FREE Information
Circle 268 on Rapid Reply

CSS Offers Wide Variety

Corporate Safe Specialists, Inc. is only five years old, but its owners have over 30 years experience in designing and selling safes to meet your customers needs. CSS carries a wide variety of safes, fire safes, depository safes, "B", "C" and "E" rate chest and very shortly they will be carrying their own line of U.L. TL-15 and TL-30 rated safes.

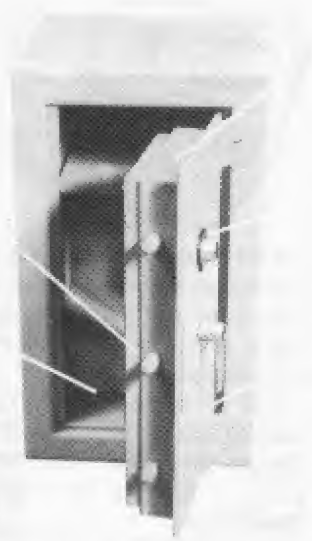


Over the years Corporate Safe's biggest seller has been its cash controller safe. This well designed depository safe can fit most any retailer, convenience store or gas stations cash handling needs.

For FREE Information
Circle 292 on Rapid Reply

DLI Safes Has 'New Look' Safes

DLI Safes announces the introduction of a full range of newly designed home and office safes. These safes have been marketed throughout North America for

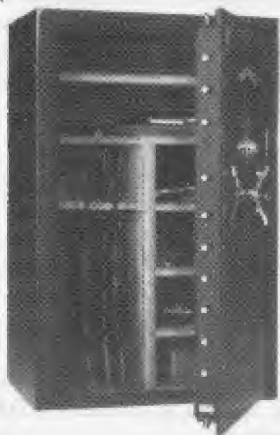


Fort Knox Secures Firearms

With the ever increasing pressure to secure firearms, Fort Knox Security Products has introduced some new features to their line of gun vaults. Laws pertaining to guns, and particularly hand guns, are a reality. The people at Fort Knox feel it is every gun owner's responsibility to secure their guns to keep them out of unauthorized hands. With this in mind Fort Knox is constantly upgrading their

the past 12 years. The proven quality has been maintained. The exterior aesthetics have been completely changed: dove gray color, splatter paint finish, fascia plate and matching handle and combination lock.

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gun vaults with innovative technology. Features like their patented concealed hinges, allow the door to open 100 degrees for full access to your contents, yet prevent the heavy door from damaging your walls and furniture, and their rack and pinion gear drive locking mechanism is sophisticated and reliable locking and is completely maintenance free.

For **FREE** Information
Circle 270 on Rapid Reply

Gardall Adds Cash Register Tray Safes

Gardall Safe Corporation announces the introduction of a new line of cash register tray security safes. The new line of security chests gives Gardall dealers an economical way to provide their customers with a safe that protects both deposits and cash register trays at the same time. The Gardall model FL2522 is equipped with a front loading depository that drops into a cam locked compartment,



The RC2522 is the same safe with a rotary depository. Either safe can be ordered with two adjustable shelves or five fixed location shelves as the interior.

For **FREE** Information
Circle 271 on Rapid Reply

Granite's Containers

Granite Security Products, Inc. is the manufacturer of Granite safes which were the first to pass the U.L. test for Residential Security containers, in December 1991.

One of their popular safes

Continued on next page



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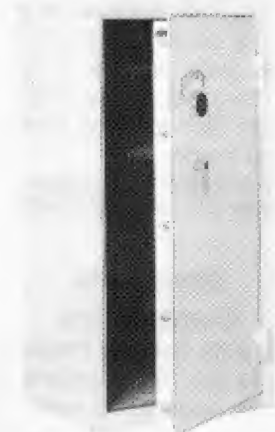
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information

Providing quality
tools, parts, and
service for
the security
professional.

GRANITE SAFE

Continued from page 37

is the Granite 24, which offers 25 cubic feet of storage capacity. The safe is finished with high-gloss metallic paint in a selection of eight decorative colors. Door accents include hand-painted logo and striping along with the handle and dial in either gold or silver.



Each Granite 24 is fully firelined in the body and door and offers a selection of interiors to meet any storage requirement. The entire interior of the safe is covered with a rich velour.

For **FREE** Information
Circle 272 on Rapid Reply

GunVault™'s Minivault™

GunVault™, Inc. introduces the MiniVault™ and MultiVault™ rapid-access safes, first in the company's line of rugged Home Defender™ products.



Suitable for use in homes, hotels, automobiles, watercraft and recreational vehicles, the GunVault safes were originally developed because increasing numbers of states, alarmed at the

incidence of death and injury due to handgun accidents and misuse, have developed legislation mandating safe storage. At the same time, most owners of handguns, while supporting the idea of secure storage, are also demanding safes that permit rapid easy access.

An all-new keyless locking mechanism permits operation totally by touch, even in the dark, and allows for more than 40,000 reprogrammable, user-selected access codes.

For **FREE** Information
Circle 273 on Rapid Reply

Lifetime Products' Lift-a-Load Trailers

Lifetime Lift-a-Load Trailers are now available in capacities ranging from 4,000 lbs. up to 30,000 lbs. Lift-a-Load trailers offer the capability to load at ground level, dock level or anywhere in between. The trailer bed remains level at all times.



A 36" long tailgate/ramp makes loading any heavy, low ground clearance item easy. The steel diamond plate floor provides traction and a solid base for small diameter tires. Lift-a-load Trailers have a totally enclosed hydraulic system powered by the 12 volt electrical system on the tow vehicle.

For **FREE** Information
Circle 274 on Rapid Reply

Lockmasters Has Miles X4 Locks

The Miles X4 safe deposit lock line is now available through Lockmasters, Inc. The X4 is available in three versions of nose design. Keys are also available.

These dual nose locks are noted for their reversing bolt throw capability and changeable nose size. Technicians may be familiar with the X4 as being



extensively used in hotel/motel safe deposit situations.

For **FREE** Information
Circle 275 on Rapid Reply

LSDA To Distribute Hayman Safes

Locksmith Distributors of America (LSDA) and Hayman Safe company are pleased to announce an agreement unique to the security industry.

LSDA is the exclusive distributor of quality built U.S.A. made Hayman Safes.

Viri Mullins and Al Hoffman of LSDA, and Bill Hayman of Hayman Safe Company, Inc. have agreed to this unique exclusive arrangement for U.S. and Canadian LSDA locations.

Hayman is the only safe manufacturer to guarantee that any standard production safe that is ever successfully burglarized will be replaced or repaired free.

Hayman offers such features as the patented "Hayman Hinge", posi-drop" hoppers, "designed colors" and "no excuse" seepage warranty on in-floor safes.

Hayman offers 21 models of in-floor safes, 26 models of depository safes including B & C-Rate with standard cash drawer capability as well as General Vaults, Money Chest, Wall Safes, hotel Safes and Builder Model "Lunar Lander" Safes.

For **FREE** Information
Circle 276 on Rapid Reply

HSK-10 Shimkit By Major Mfg.

A handy assortment, introduced by Major Manufacturing, contains 10 each of nine different sizes of precision brass hinge shims.



This kit is used to shim worn safe hinges in order to raise a safe door back to proper height, and prevent the door from dragging.

The kit is packaged in a plastic box for convenient storage, and each thickness is color coded for easy identification.

For **FREE** Information
Circle 233 on Rapid Reply

Mancini's New Line Of Safes

Mancini Safe Company has introduced a new line of safes. The utility chests like everything else in the line uses S & G locks. This versatile and inexpensive safe has several applications including "in the floor."

The depositories consist of three sizes including a large double compartment unit. They are all front load and like the utility chests feature 1/2" thick door, which is recessed into a "rolled front" body. The TL-15 features a 3" door slab including a full sheet of manganese over the door and huge 1-1/2" bolts with a 2" throw. The S&G combination lock, Mauer key lock, and the live relocker are all protected by glass with the cable in a tube to prevent pinning.

For **FREE** Information
Circle 277 on Rapid Reply

Smart Safe® Is New From McGunn

Heavy steel plate and micro-electronics are combined by McGunn Safe Company to build a safe that is truly state-of-the-art. This new safe, named "Smart Safe®" is so smart it can identify the user and keep the time and date and users' I.D. in its memory chip for recall.



Smart Safe® vends cash as requested and provides time delay locking on the door and automatic time locking after hours. Smart Safe® can recognize up to 50 users and allow them different levels of access according to their rank: owner, manager or clerk.

For **FREE** Information
Circle 278 on Rapid Reply

Meilink's Fire And Burglary Safe

Meilink has designed a new safe and label that offers peace of mind against both fire and burglary. Meilink's



new Residential Security Container (RSC).

The safe line is designed for applications where a TL-15 rated safe exceeds the security requirements of the customer, however, some level of security for both fire and theft is desirable. This line of safes is built with specially designed reinforcements against forced entry by common mechanical tools.

The RSC label is available on all of Meilink's Premium Record Safes.

For **FREE** Information
Circle 279 on Rapid Reply

National Security's Distinctive Safe's

The National Security Safe is a distinguished hand-crafted home or office furnishing. It artfully combines the latest technology with fine materials and impeccable workmanship. Open or closed, it makes a powerful statement of strength, elegance, and style.

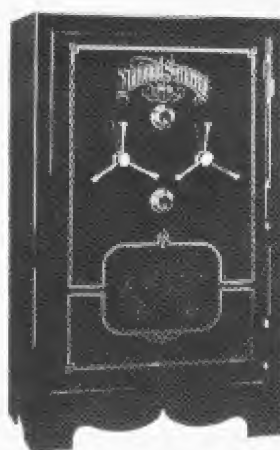
Quality features include a heavy, extra thick steel door, a triple-wall fireliner, 100

percent nylon velour interior, and their hallmark mirror finish.

For **FREE** Information
Circle 293 on Rapid Reply

Rotary Hoppers By Pacific Security

The PSP Series from Pacific Security Products includes four sizes of Rotary Hoppers. The hopper features removable, adjustable hopper handles and 1/2" steel plate doors. Other features include a



Continued on next page

Major

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PACIFIC SECURITY

Continued from page 39

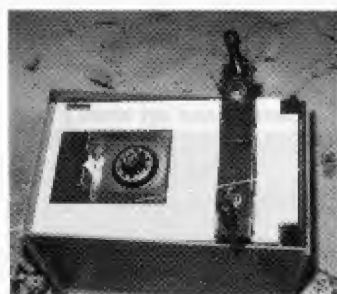
heavy duty 1/4" steel body, full boltwork with 3 chrome 1" steel bolts, additional relocking system, breakaway door handles and security flange to prevent removal of the door during attack. Four predrilled bolt holes are standard and the hopper offers cash till storage capacity.

The weight of the PSP Series Rotary Hoppers range from 132lbs. to 275 lbs. and are available in beige, the standard color.

For **FREE** Information
Circle 280 on Rapid Reply

Jim Ripley's Safe Tool

Jim Ripley's Services Inc. offers a new locksmith tool, sold under the name of "Safe Monkey Wrench II™."

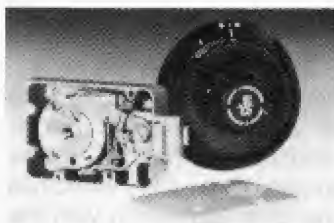


This tool in addition to the Safe Monkey Wrench™ will overcome lock malfunctions, lost combinations, set relockers, as well as burglar attempts without drilling hard plate or precision drilling on many square door floor safes. Some can be opened in as little as 15 minutes.

For **FREE** Information
Circle 281 on Rapid Reply

S&G's Scrambler™ Combination Lock

In fast food restaurants, convenience stores and other retail establishments, leaving the safe combination dialed in for easy access during busy periods is known as day locking. This is a common practice that can contribute to lost profits due to the



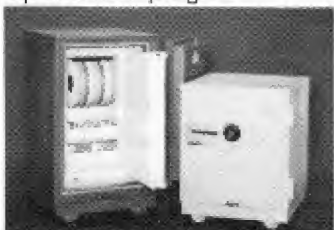
mysterious disappearance of cash. The new Scrambler™ combination safe lock from Sargent & Greenleaf is specifically designed to prevent day locking, reducing the incidence of unexplained cash shortages and deterring employee theft.

The Scrambler builds and improves upon the inherent security offered by a mechanical, three-wheel combination lock. The Scrambler automatically repositions, or "scrambles," the lock's wheels the instant the lock's bolt is retracted. This means that when the safe door is closed, it can't be reopened unless the combination is completely re-dialed. This insures that only authorized personnel who know the combination can access your safe. The continuous security provided by Scrambler significantly reduces the threat of internal or employee theft.

For **FREE** Information
Circle 282 on Rapid Reply

Media Safes Direct From Schwab

Schwab's two new media safes provide U.L. classified 125 degree protection for computer media forms. The 1820CTS holds up to 600 3-1/2" diskettes or 12 10-1/2" tapes. The 1830CTS holds up to 1000 3-1/2" diskettes or 24 10-1/2" tapes. These safes are also covered by Schwab's unique \$100,000 covered contents warranty and their free after-the fire replacement program.



For **FREE** Information
Circle 283 on Rapid Reply

Compact Storage Case From Sentry

Sentry Group recently introduced the model 1000 fire safe storage case, its smallest, most portable, and most affordable storage case yet.

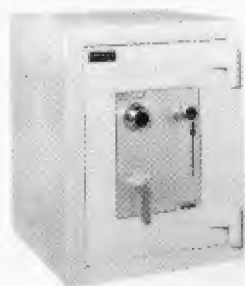


This U.L. classified case will prevent documents from being destroyed in temperatures as high as 1500 degrees Fahrenheit. Measuring 5 inches tall x 12-1/2 inches wide x 14 inches deep, the storage case is perfect for customers with limited space.

For **FREE** Information
Circle 284 on Rapid Reply

AMSEC's Amvault Composite Safes

Recently American Security Products introduced their latest in high security protection, the new Amvault TL-15 and TL-30 two hour fire rated composite safe. The Amvault comes in seven single door models and one double door model ranging from 1.8 cu./ft. to a very large 36.0 cu./ft. of storage space.



Amvault's massive door and body is constructed of outer and inner steel plates enclosing a unique, high density fire and burglary resistant composite material. The new body design replaces conventional door jams with drill resistant recessed bolt chambers.

For **FREE** Information
Circle 285 on Rapid Reply

Bonafide's Rotary Hopper Safes

Perma-Vault introduces new Rotary Depository Hopper Safes, to add to their product line of affordable Cash Protection System models.



These units can be placed in a convenient location in your vehicle, office or store where cash, checks or receipts are handled.

Safes are equipped with choice of U.L. approved combination lock or Sargent & Greenleaf dual safe deposit lock. Large capacity hopper opening (2-1/2" x 5-3/4" x 10-1/8") for deposit of most money bags or envelopes without unlocking.

For **FREE** Information
Circle 286 on Rapid Reply

Fort Knox Improves 1993 Models

The 1993 models will offer a variety of new features. They have added a special Bolt Guard™, an angled steel bar, that protects the locking bolts from any possible defeat. They have also designed a hard plate with



steel ball bearings mounted in critical areas to protect the locking mechanism against any drilling.

Fort Knox now carries the uncompromising U.L. listing for gun safes. The fire protection package has been tested and certified with temperatures exceeding 1200 degrees, while keeping the inside of the safe under 350 degrees.

For **FREE** Information
Circle 287 on Rapid Reply

Major Mfg.'s Nose Puller

This safe deposit nose puller from Major Manufacturing has earned the name "Compact magnum Puller" for its handy size and pulling force. The entire puller is machined from bar steel for strength. Roller bearing are used between the two mating surfaces to reduce the effort required when in use, and the knurling provides for a better grip.

In use, a sheet metal screw is driven into the center of the safe deposit locks keyway.



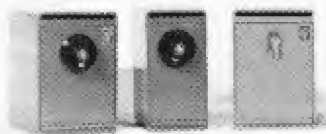
Then, tightening the unit will pull the core out. The use of the guard key and wire or similar tool will retract the bolt.

the CMP-101 can also pull cylinders from padlocks, automotive locks, and many other types of cylinders and plugs.

For **FREE** Information
Circle 233 on Rapid Reply

Pacific Security's Mini Depositories

Pacific Security Products offers three sizes of mini depositories trim till safes. Features include 1/2" steel plate door, 1/4" steel molded body, and an S&G U.L. rated key lock, a secondary relocker-



hinged doors are protected by security flange.

These safes are available in either key lock or combination lock and dial. Two predrilled bolt holes are standard and feature extra large deposit slots. They are available in the standard color beige and range in weight from 30 lbs. to 50 lbs.

For **FREE** Information
Circle 288 on Rapid Reply

Schwab's Inside Delivery Program

If you don't stock and sell safes because they are too difficult to deliver, you may



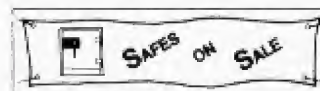
want to reconsider and take advantage of Schwab's national inside delivery service. Designed to make life easier for our dealers, you can now provide your customers with Schwab's quality safes without having to stock them or deliver them.

For **FREE** Information
Circle 289 on Rapid Reply

Turn 10 Wholesale Offers Discounts

Turn 10 Wholesale now offers 50 percent off on their 12 best-selling Gardall safes and all of Meilink's safes until September 30, 1993. Now all orders receive free freight and free drop-ship option.

Locksmiths with shops who order \$700 net, qualify for one free Gardall or Meilink display rack while quantities last, and a free bright yellow "Safes on Sale" store banner.



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DOING THE JAILHOUSE LOCK

"After practicing jailsmithing for three years, I have yet to make enough money to break even for the money I've spent."

This is the first in a series of articles to be written by Rick Segerstrom about service and installation of jail locks and security systems. We believe that this is a topic that will be of great interest to readers of The National Locksmith, and we are very pleased to welcome Rick.

If you have been considering jumping into the jail and prison lock repair, I have a few thoughts to pass on to you to help you make an informed decision.

I have been a practicing jailsmith for the last three years. I have devoted countless hours and thousands of dollars to target this market. I have advertised in jail publications and I have done face to face sales pitches. I have yet to make enough money to break even from the amount of advertising dollars I have spent. Please allow me to relay my story.

I decided on jailsmithing as a viable alternative to general locksmithing. I was looking for a market that I could

target that would provide me with several features not available in the general locksmithing field. First I wanted high pay. I believe this to be the most basic of all wants. Next I wanted a field of locksmithing that afforded me the ability to travel, not just around town, I already drive 60,000 miles a year, but the luxury of traveling to various parts of the country on a moments notice. I had this luxury in the previous business I was in and really liked seeing all that America had to offer. Next, I wanted an area that the people I dealt with understood the cost of having something repaired, and were readily acceptable to the cost of these services. Another words I wanted to deal with people who already knew the cost of repairs and were more interested in prompt, professional service than in just dollars and cents. Finally I wanted an area that wasn't overpopulated with other locksmiths

causing everyone to cut prices, service, and ethics. Don't get me wrong, I love good solid competition. I don't mind bidding on anything as long as all parties are bidding on the same things, and the same rules pertain to everyone.

To try and fit all of my criteria into one area of expertise wasn't easy but it finally happened. One weekend I attended a seminar and listened to several presentations. Afterward as I hung around in the hallways and talked to the instructors, I overheard one instructor discussing jailsmithing and how easy it was to repair jail type locks, and the world wide need for these type lock repairs, and of course the high pay associated with this type of service.

Well let me tell you that a light bulb

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illuminated above my head and I knew that God himself had shone me the path to riches and glory. This is how I finally settled on jailsmithing as the niche I wanted to fill. I envisioned several service trucks dispatched from my humble offices staffed with underpaid and overworked dedicated service men whose only objective in life was to rack up billable hours and miles for the company.

Now I knew this might take a while but, hey, I was dedicated and willing to spend whatever monies and time it took to get myself and my men fully trained, tooled and geared up to handle whatever problem those big bad men locked behind bars could possibly create. I gave myself six months before I was indispensable to the detention industry.

Let me tell you now that this scenario not only didn't occur but could never occur without substantial capitalization, an advertising budget along the lines of GM and factory sanctions by all three major manufacturers. I spent money joining the American Jail Association, advertising in the service directories that are sent to all the facilities, direct mailing lists, printing, postage, etc. etc. My return has been three

phone calls from facilities in various parts of the country that only wanted to discuss the possibility of doing a site survey for possible problem solving. Vague to say the least.

There is definitely a jail market out there. These facilities must have maintenance done on them and in most cases, someone else is doing this maintenance already. The detention lock service market is not the pie in the sky market it is being made out to be. It is another market segment that if properly trained for, you can turn a reasonable profit for services rendered. Without proper training and accreditation, however, you cannot even begin to service this market. Getting that training is another matter.

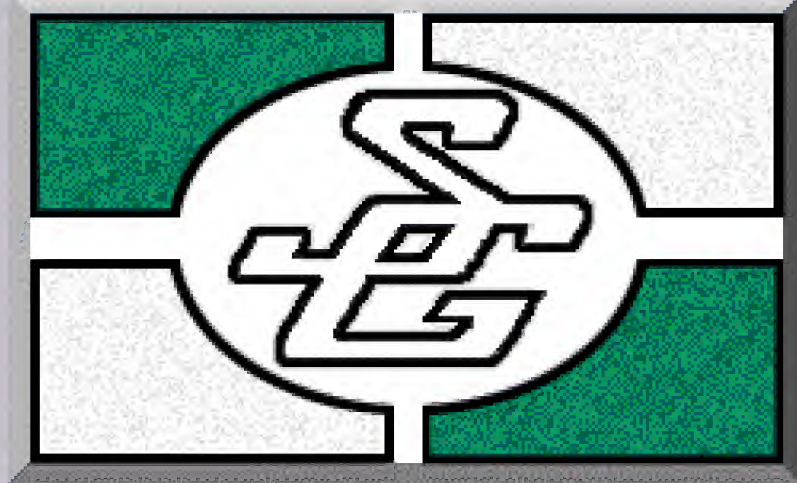
I had to get sponsored by the facility I was going to maintain before I could register for the training classes at the factories. This required a letter on county government letterhead stating that I was being sponsored by this county for training so that I could perform service and maintenance procedures on their locks and devices.

I lucked out in that the locks in the facility I was being trained on were manufactured close by in San Antonio, Texas. The name of the manufacturer

is Southern Steel. This is only one of the three major manufacturers of detention locks and controls. The other two major manufacturers are Folger Adams located in Lemont, Illinois, and Adtec Detention Lock Systems also located in San Antonio, Texas.

There are several smaller manufacturers and lots of DEC's or detention equipment contractors, who actually install the locks and build the facilities, but if you wish to enter this area of service you will want to attend classes at either Folger Adams or Southern Steel. At this writing I have heard of plans for Adtec to begin classes but haven't heard whether or not they have begun.

Classes are offered in one of two ways. First is the standard 6 days of classes lasting from 8 am to 5 pm each of six consecutive days. Secondly, you can do the training classes in 3, 2 day segments. Depending on your schedule and availability you can choose which ever meets your needs best. Cost of these classes runs about \$350 for the consecutive classes and \$150 per segment for the staggered classes. Your hotel and meals are not provided, this is your responsibility. Classes are on an invitation basis. You



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get an invitation by being sponsored, and making application. You are then notified of the first available class. From here it is by reservation. You can prepay or pay upon arrival.

Let me reiterate, that this is an area of highly specialized training that can mean good profits. It is not an area where you will immediately be inundated with facilities begging for your services. The market for your services is local and county lockups. Most state and federal penitentiaries have on-staff, on-site locksmiths. If you are currently working for the county government, or the city government in your home town, be sure and ask about doing the routine maintenance on their facility. Visit with any of the surrounding counties and let them know that you are available. But do this only after you have taken classes and are capable of performing whatever services that

may be required.

Possibly the worst thing that can happen is that you are called to a facility to fix a malfunctioning lock and upon your arrival are confronted with something you know nothing about. The men and women that work in the detention industry are confronted every day with people that talk a good game but can't perform. They just plain won't deal with anyone that is incompetent and doesn't know what they are doing. You only get one chance to make a favorable impression. If you don't know what you are doing, there is absolutely no way that you'll get called back again.

The detention industry is a lucrative market segment for qualified, competent, honest locksmiths. As with any other segment of our industry professional ethics are demanded for your success.

I began by contacting the people at

the county jail, in the county in which I lived. Now here a series of events starts that makes this whole story seem that I was destined to go in this direction and succeed as no-one else ever had. First, I made one grave error, I didn't research the market I wanted to target at all! On the day I called the county facilities maintenance manager. I was surprised at the reception I got over the phone. As soon as I told him that I was with D & R Locksmiths Security Corners he was eager to talk with me. Seems that the county had just built a new courthouse and jail right downtown, and the courthouse was in need of a new masterkey system. Hallelujah and bar the door, I was ready to work!

We made an appointment to do a walk through of the facility that afternoon. By evening I had a verbal commitment to begin work as soon as possible. I did the masterkey job and added several thousands of dollars of additional deadbolts throughout the facility over the next two months. By this time I had gotten close to the building engineer that had authority over both the courthouse and the jail. I approached the engineer about doing work in the new jail. Of course he was very receptive to my ideas. As yet I hadn't even seen a jail lock in operation or hadn't any idea who even manufactured the things. But I was convinced that this was the way to go.

There was a problem in one of the holding cells on the 6th floor of the new courthouse and, I was informed, that a factory rep was coming to effect repairs the following afternoon. I made arrangements to meet this fellow. Quite by accident, of course, and watch over his shoulder to learn everything there was to learn about the function and repair of every detention styled lock that ever existed, strictly by osmosis and careful questioning and observation. Seemed feasible at the time!

To make a long story short, when he arrived, he produced tools to remove the screws like I had never seen before. I was lost as soon as the cover was pulled. It looked to me like a jumbled up mass of wires and giant bolts that someone had somehow packed into the smallest package that it could possibly fit into. I knew I was in trouble with my original plan. However the really good part of this is that the service rep was friendly and genuinely ready to answer all of my

Continued on page 81



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**¡Hola
Amigos!**

LA CERRAJERIA MEXICANA

En este artículo vamos a aprender más sobre la cerrajería en México, y que tal fue la convención allí.

Bienvenidos amigos al primer número de *The National Locksmith* con un artículo escrito en español. Me llamo Marc Goldberg, y soy el director o editor de la revista. Ustedes me tienen que perdonar si mi español no es perfecto. Es que mi primer idioma es inglés, pero estudiaba el español en la universidad. También he pasado mucho tiempo en España para aprender más del español.

Empezando con este mes, intentamos a compartir información importante con ustedes que hablan español y no el inglés. Acabo de regresar de un viaje a México y les voy a comentar que tal fue mis experiencias allí.

Me fui recientemente a la ciudad de León en el estado de Guanajuato, México. Fui con Shirl y Normando Schamp (escritores de la revista) para asistir el séptimo Convención Nacional de Cerrajeros Profesionales, organizado por la Asociación de Cerrajeros Del Centro De La República Mexicana.

He tenido la suerte de conocer al profesor Guadalupe Barroso, el presidente de la asociación. Este es un señor que tiene un sueño. El sueño del profesor Barroso es que el cerrajero Mexicano tiene la oportunidad de aprender lo máximo posible sobre la tecnología de la cerrajería, para que el cerrajero se puede mejorar.

Profesor Barroso fue tan amable como invitarme a asistir la convención para conocer unos cuantos cientos de cerrajeros Mexicanos. Varias clases ayudaron a la gente para aprender más sobre varios temas como los automóviles nuevos de Chrysler, Cavalier por ejemplo. También, vinieron varias compañías importantes para exhibir sus productos, incluso la compañía Alba, fabricante de llaves, HPC, fabricante de herramientas, y muchos más.

Durante los siguientes meses, les vamos a informar en español con unos artículos sobre como hacer servicio para autos, como usar ganzuas nuevas, como abrir cajas fuertes, y muchos otros temas. Les pido el favor de que ustedes enseñen nuestra revista a sus amigos con la idea de que ellos



Marc Goldberg y Sr. Guadalupe Barroso, presidente de la asociación.



Los organizadores de la convención hicieron un trabajo enorme.



Sr. Rafael García de Alba, de la compañía Alba, fabricante de llaves.

también se escriban. Así, con una gran cantidad de suscripciones a gente que hablan español, podremos poner aún más artículos en su propio idioma.

Ahora, les quiero informar sobre la historia de las convenciones en México, para que ustedes pueden apreciar más el desarrollo de la cerrajería allí.

El responsable fue el profesor Guadalupe Barroso quien en años anteriores al 1988 tenía la idea de reunir varios cerrajeros con el propósito de intercambiar ideas sobre el trabajo de cada uno de dichos cerrajeros. Algunos opinaban que eso sería muy bueno, otros decían que para


que, si cada uno realizaba su trabajo a su manera. Otros opinaban que Guadalupe Barroso estaba loco y que casi nadie interesaría reunirse.

Pero a pesar de diversas opiniones, se elaboró una pequeña invitación la cual fue entregada a las distintas cerrajerías, llevándoles personalmente y participando también su hermano el Sr. C. Luis Barroso y su esposa la Sra. Ma. de Jesús Parra. A unos cerrajeros le entusiasmó mucho. Otros simplemente lo recibían. A algunos les molestaba y mencionaban que no les interesaba. Pero a pesar de todo la primera reunión de cerrajeros se llevó a efecto el 13 de noviembre 1988, en la ciudad de San Felipe, Gto.

Asistiendo a esta reunión fueron treinta personas de las diferentes ciudades de la región. Asistió la reunión el padre del profesor Barroso, el Sr. Guadalupe Barroso García, quien se inició en la cerrajería en 1935 con muy poca herramienta, y elaborando el mismo sus propias forjas, cortándolas de pedazos de láminas y dándoles forma con su propia lima.

La segunda reunión fue en la ciudad de León, Gto, en 1989. Esta tuvo mayor éxito. Pues asistieron 150 personas. En esta ocasión vinieron personas de lugares más lejanos como México, Puebla, Aguascalientes, Guadalajara, etcétera.

Durante los siguientes años habían más convenciones. Todos tuvieron cada año más éxito. La de 1992 fue asistido por más que 325 personas. Y este año, la séptima convención en León otra vez, vinieron más que 350 cerrajeros. Los organizadores de la gran convención este año eran el presidente de la asociación Guadalupe Barroso, vicepresidente Juan Manuel Cholíco Muñoz, tesorero Ramón Frías Trejo, secretario Alberto Herrera García, vocales Antonio Avalos Flores, Reynaldo Ruiz Hernández, y Francisco Contreras.

Por mi parte, lo pasé de una maravilla, charlando con la gente, y me trataron muy bien, con brazos abiertos, y se inscribieron muchos. Bueno, gracias por su atención, me alegro poder comunicarme con ustedes en su idioma, y hasta el mes que viene. 



by
Jake Jakubowski

KEEP 'ZE VAGON' FULL

"In the formative stages of any business having 'sufficient inventory' on hand is determined by the amount of cash on hand."

My paternal grandfather came to America, from Poland. He worked as a street sweeper, night watchman, dishwasher, cook, and ultimately, as a "ch-heff" at one of Baltimore's finer hotels. Along the way, he married, fathered six boys, one girl, bought a home, grew grapes, and raised a vegetable garden every year. Like my father, and uncles, before me, it was that vegetable garden that "Pop" used to teach me some basic lessons about economics.

Every year, Pop would grow tomato "seedlings" in his seed beds. Not just twenty, or so, for his garden, but *hundreds* of those suckers! The excess were to "zell" to the neighborhood gardeners. Just like the overabundance of produce from the garden was to "zell". And, when I was old enough, I was the "zellsman."

At any rate, in early spring, Pop would have me get my "vagon" and load me up with tomato plants. I would pull that wagon around town and sell tomato plants (Honest!) for a penny a piece, or 12 for a dime! "Efferbody got garden, efferbody got dime, By" (Somehow, the 'o', never got into "Boy").

"Zo, you zell dime bunch, By". If I complained that he had given me too many plants, Pop would say, "You can' zell from no empty vagon, By."

Then he'd hold out the carrot that was guaranteed to stop my complaining, and get me hustling: "You zell twenty bunch, By, and I giff quarter for pitchur Sa'day!" Twenty-five cents! That would get me in the movie, buy my soda, and two candy bars! He used the same leverage throughout the summer, for the produce he wanted me to sell. "Zell good today, By, and I giff quarter for pitchur Sa'day!"

Sure, I know. Even in the context of the times, I was being "underpaid." I didn't know it then, and by the time I realized it, the "pay" had become secondary to the lessons I had learned. In his own way, Pop taught me some basics about business.

He taught me that if you sell people a product they need, at a price they can afford then, "Efferbody got garden. Efferbody got dime!" He taught me that you set your goals a little on the high side, but not so high that you can't get your "quarter for the pitchur Sa'day."

I can't really remember how many springs and summers I was "zelling" for Pop. I don't remember how many quarters I got for "pitchur(s) on Sa'day." But I still have vivid memories of warm, sandy, soil between my bare toes. A hot, bright, sun beating down on my skin. And memories of a seemingly, gigantic, old man placing a callused, work-worn, hand on my shoulder and saying: "You can' zell from no empty vagon, By."

Since that time, I have (either for myself, or others,) sold produce from an open (No Kidding!) horse-drawn wagon, Wolverine Brand Salve, religious pictures, vacuum cleaners, sewing machines, new and used cars; and the products and services of businesses that I have been fortunate enough to own. Through all of it, having a "full wagon" (sufficient inventory) has played a major part in any success that I may have enjoyed.

In the formative stages of any business, locksmithing included, having "sufficient inventory" on hand is going to be determined by the amount of cash on hand. Since most new businesses are longer on enthusiasm than they are on "cash," inventories will tend to be a little on the slender side.

The good news is that as locksmiths, our inventory may be less than "sufficient," and still not prevent us from making the money that we would like to make. That is assuming you have acquired the basics such as key machines, a good cross section of key blanks, basic hand tools, a few key-in-knob sets, and deadbolts. The rest of what you may need is only a phone call and 12 to 24 hours away.

For example, you get a call from a hospital to service "a broken lock."

When you get there, you find the "broken" lock is a Yale 8722 full mortise, dormitory lock, with an anti-panic function. Or they have a Sargent 8100 series mortise lock on an office door that needs repair, or replacement.

You check out the lock, determine that you are unable to repair the mechanism, and you tell the customer they need a new lock. They authorize you to replace the lock.

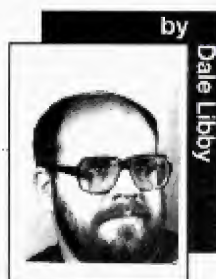
I don't know about you, but I only "zell" a few of these types of locks a year; so I don't normally carry them around on my truck, or keep them in the store-room at home. In fact, I don't know of too many locksmiths that do. However, one of your suppliers will have them, and with good ol' UPS, and Next Day Air (Red Label), you can have that lock on your customer's door the next afternoon!

Once the customer gives you authorization to replace the lock, let them know you do not have one in stock, but if it is "urgent" that the lock be replaced, you can have one "Red Labeled," and on the door "tomorrow." Generally, that will satisfy the customer. However, you need to let them know that they will have to pay the shipping charges involved. If it is not an emergency situation, tell the customer you can have the locks in "a couple of days."

The one thing that you do not want to do is start hemming and hawing, and stumbling apologetically because you do not have a particular item. The majority of the people that you deal with on a commercial or institutional level, recognize that what they want "today" is not always available. When you offer to have it "on the door tomorrow," they appreciate the quick service. Often, these people have to wait days, or even weeks, for needed replacement items.

The main thing is that you respond to your customers request in a positive manner. Don't say that you "can't," or that you "don't know." If

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by
Dale Libby

FOILED BY A LA GARD 2200

"Not wanting to wait for the timer, the robber left hastily, taking the keys with him."

You can learn a lot about a safe just by looking at it, even before you touch it. The safe in question this time was labeled by McGunn Safe Company of Chicago, and probably manufactured in Korea. It is a rather standard, modern configuration with a combination lock top center, a handle on the left side, and a lower pin tumbler key lock. The time delay unit is optional.

Also optional and added later was the 2200 time delay unit and key lock made by LaGard. (See photograph 1.)



1. Typical "McGunn" type door configuration of handle, key lock and lock placement. Time lock is optional.

This safe had been worked on by someone else before. The paint did not match and the previous repairs were somewhat haphazard and not done well. Also, when the standard combination lock was replaced, the lower relocker was welded into the open position.

The story on why this safe container had to be opened is interesting. This unit was installed in a chain pizza store. The units come over and under, in other words, two units stacked on top of each other. The lower unit had a standard LaGard combination lock with no time delay and the upper door had the key lock.

The robber hopped over the counter and put a large caliber hand gun in the managers face and told him to open the safe. The manager told him about the delay, and that made this robber quite upset.

He played with the LaGard keys and the lower key lock keys. He did not want to wait for the timer to go

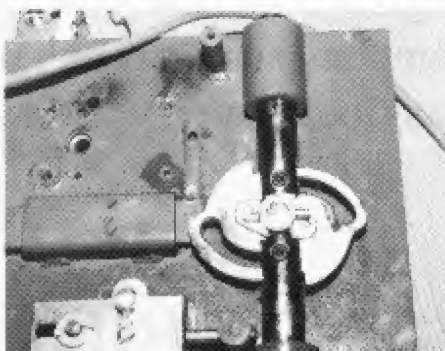
down, so he left hastily, and took the safe keys with him as a final tribute to the delay mechanism.

Photograph two shows the lower bolt bar into which the relocker and the key lock enmesh. The relocker, previously wired to the back of the original lock, has been de-activated by welding it into the open position. The key lock, which is turned clockwise from the outside, retracts the bolt from its hole in the lower bolt.



2. Inside bottom view of door showing lower locking bolt, welded relocker, and back of the key, locked.

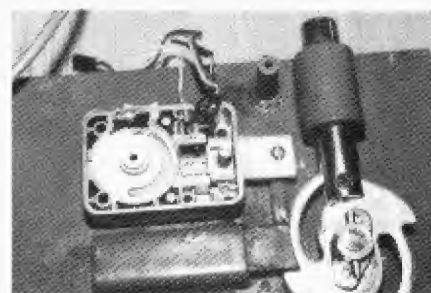
In photograph three the key plunger has been moved out and away from the lower locking bar, and the opening cam turned to retract both upper and lower locking bolts. Note that to the left of the cam is the main blocking bar that locks this container. It is a large enclosed bolt with a right



3. Lock in open position and handle turned. Note key lock bolt has been retracted away from lower bolt bar.

angled arm welded to the end of it. In this arm is a hole which a screw from the combination lock fits into.

Photograph four shows this screw



4. Placement of combination lock over blocker bar. Note screw in extended combination bolt that fits into blocker bar.

in the extended combination lockbolt that fits into the blocker bar and its position when the unit is locked. The upper bolt is clearly shown in the locked position.

The brains of this lock, beside the electronics, is the micro switch and the locking lever as shown photograph five. When the bar lowers and raises, it makes the electronics function in their proper and respective



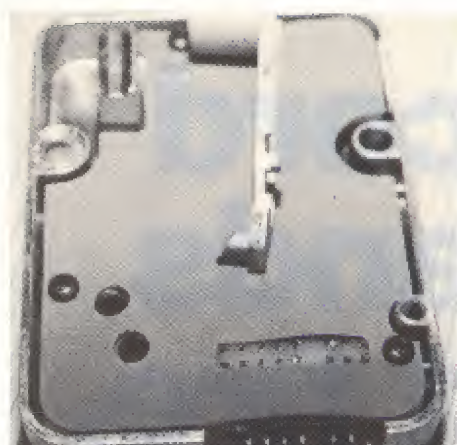
5. Locking lever and micro-switch which is activated when lever drops and raises.

order. Photograph six shows the end of the lever, or actually the stub of the lever after drilling it off. It has been placed on the back cover.

Photograph seven shows the lock, wires, and electronics. Everything plugs in quite nicely, and when the unit is working with the proper keys, it is a very nice user-friendly set up.

OPENING PROCEDURES

There are several ways to attack this lock. First, the longest way, and then the shortcut way. The longer way is to drill at from 98 the appropriate distance for a LaGard lock to expose



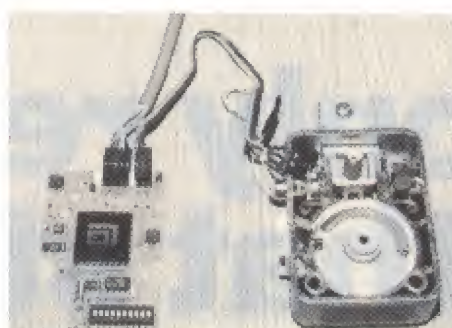
6. Locking lever with fence shown drilled off. It has been placed on back of 2200 lock cover.

the lever. There are two ways to go from here:

1. Probe the wheel gates under the lever, raise and lower the lever until the timer goes off, and then probe to open. Not recommended in this case, too much playing around

2. Drill off the lever and use any 2200 old style key to activate the drive cam (or last wheel). The newer style LaGard locks use a hollow tipped key.

There are other ways to attack this lock, but these are the most popular. I was not able to use the "SKIP PICK"



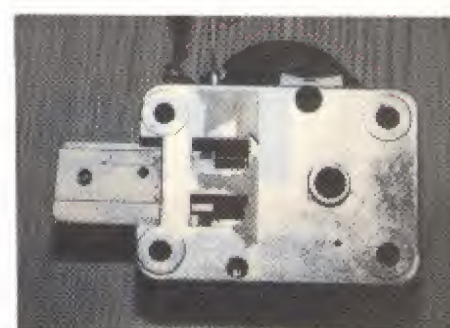
7. The electronics in the time delay lock for controlling the timer and the solenoid.

to any great success, so I opted for drilling.

The other way to open this lock quickly and to avoid the time delay, whether it is time lock protected or not is to drill directly for the screw that holds the blocker bar and the combination bolt together. Once drilled off or out, the blocker bar can be moved and the lock opened and the delay function is bypassed. The measurement for this is LC2-7/8".

This is how I would go about opening one of these locks. After opening, the bar can be repaired and a new LaGard extended bolt can be replaced.

This is how the lock must be used



8. Underside of lock showing blocking pin in upper square cut-out and drilled hole in top of lock.

in order to open it by using the delay function, either with the correct key, or after drilling off the locking lever.

1. Insert the correct key (or any key when the lever has been drilled off, turn right, lever will drop, turn left and remove key. This starts the timer. This one was set for 15 minutes, and the timer starts to count UP from 00:00 to 15:00.

2. After the timer has run up to 15 minutes, it beeps and the display starts counting DOWN from 5:00 minutes to 00:00. This is the opening window for the lock.

3. Again, insert the proper key and turn to the right. When the lever

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SHOP TALK

Helpful questions and answers

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your questions to *Shop Talk*, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: I have purchased *The National Locksmith Guide to Manipulation*. The forward note recommends the purchase of mounted, cutaway, group 2 combination locks. Where can I find them? Frank Smode, Bend, OR.

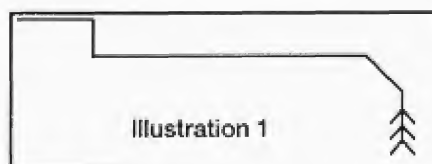
A: These locks can be obtained

from Lockmasters in Nicholasville, Kentucky. The LaGard is \$42.35, the Ilco is \$66.60, the S&G three wheel is \$69.91, and the S&G four wheel is \$96.21. The phone number for Lockmasters is 800-654-0637.

Q: We have worked with the Miles Osborne Co. in the past and found them to be extremely helpful. However, recent attempts to contact them have been fruitless. Do you have any information on how who to contact for support on their equipment in the field? LeRoy Z. Page II, San Rafael, CA.

A: Yes. According to Randy Miles of Miles X4, the Miles Osborne Co. split about two years ago. The X4 safety deposit box lock (the lock and not the casings) and support can be found by calling them at 714-842-4423. Randy also suggest using their FAX line to resolve problems and make orders. Their FAX number is 714-842-4525. They are located at 16402-C Gothard St., Huntington Beach, CA 92647.

Q: I once purchased a car tool that I can no longer find. I would appreciate your help in locating this tool. A drawing of it follows. (See illustration 1.) Joseph Keith, Brockton, MA.



A: Sorry, Joseph. I've been specializing in auto work for almost 10 years now and despite seeing hundreds of tools, I don't recollect seeing one like that. If any readers happen to know who makes this tool and where to get it I'll be sure to pass the information on.

Q: I'm writing to see if you have a list of Motor Clubs that I and contact and be put on their list of vendors. I'd also like to know what requirements they might have. Bob Seko, Lake Park, GA.

A: Well, Bob, there are quite a few roadside assistance numbers available, and, at least from my experience, it is very profitable. In a future issue I will present all the numbers I have and the requirements of each.

For now let me leave you a way to get started with the General Motors groups as I am most familiar with them.

Before 1992, a few of the GM manufacturers offered roadside assistance with the purchase of their vehicle, Cadillac and Oldsmobile being the most predominant. At that time getting on the list was simply a matter of contacting the company that performed the assistance. In order to qualify you simply had to prove you were in business as a locksmith, provide proof of insurance, and agree to a preset standard for opening rates. The rates, while lower than you would typically charge, were fair for the most part. While it was not necessary for qualifying, being available seven days a week, 24 hours a day also helped in satisfying the type of service the assistance companies looked for.

From 1992 to date almost all GM vehicles are covered by some type of roadside assistance program. Also during this time the procedure for being part of the program also changed.

To be added to this list today, a local dealer must have you on his list of preferred services or vendors. When a lock out or lost key call comes in, the roadside assistance company refers first to the dealers in the area of the customer and then to the list of vendors from that dealer. If you cover a wide territory, it is best to have your name added to the list of all the dealers in your area. This way they can't miss you.



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BUSINESS BRIEFS

News from the locksmithing industry

Industry Interview...

SCOT HOOPER

Scot Hooper, Briggs and Stratton Manager of Service and Aftermarket Sales, was not always involved with locks. In fact, before joining B&S, Scot spent most of his time in the auto vocation.

Certified by the National Institute of Automotive Service Excellence, Hooper is a licensed auto and diesel motor mechanic. As a vocational automotive instructor, he has served for seven years as an automotive vocational teacher. For six years he taught the night adult school program at Milwaukee Area Technical College, Milwaukee, Wisconsin. And for two years he served as Educational director for Wisconsin Magneto Corporation.

Hooper has also worked for several automotive speed and custom shops, worked with the local high schools and drag strip, and even raced stock car for two seasons.

In 1988, Hooper joined Curt Larson at Briggs and Stratton. By 1990 he was moved to Manager of Service for Aftermarket Sales, where he is in charge of Automotive OEM.

Looking to the future Hooper sees security moving towards interactive electronics.

"The future is moving towards where there is mechanical and electromechanical security systems," said Hooper, "The VATS system is an example.

"In the short term the future of security has started now."

In fact, Hooper sees some real changes coming the locksmith's way.

"Within the next five years we will see some really off-the-wall stuff. The (security) industry is going to really open up, and we are going to see some really unusual things." He said.

Also for the future, Hooper sees companies becoming more standardized in their parts.

"Component parts have always



Scot Hooper

been a challenge, both to the locksmith and the manufacturer," said Hooper, "but I see that as shrinking in the future.

"The talk in the industry now is to adopt such things as a corporate column, where all the vehicles will use the same column."

"As a result, the future of auto locks and service for the locksmith looks pretty good. A locksmith can expect good business growth with a minimum investment in tools and education," He said.

But what kind of changes is locksmith going to have to make to prepare for the future?

"There is a niche for the locksmith in the future," says Hooper, "in construction and industrial applications. In auto the roadside assistance programs are going to be more and more dependent on the locksmith to service their customers.

"There is going to be a need for the locksmith to specialize."

According to Hooper, training is a key ingredient to the locksmith's future.

"Along with locksmiths specializing in different areas is the need for training." He said, "Whether it's

through the magazines or associations."

"Service in any specialty is a four part proposition." Hooper adds.

"First, parts of equal or better quality than the original must be available and used. Second, the locksmith must have specialty tools, the correct tools for the job. Third, the proper manuals and application guides must be available and used. And, fourth, there must be training in removing, repair and installation before going out to the real job!"

And who would disagree?

Thanks Scot.

Industry News...

Kwikset recently named Robert A. Shortt vice president for marketing of the Anaheim-based lockset manufacturing firm and division of Black & Decker. Shortt



Robert Shortt

joined Kwikset in 1990 and has served as director of product marketing since 1991. Most recently, he spearheaded the launch of Kwikset's new TITAN line of residential locksets, the most aggressive and successful new product introduction in Kwikset's forty-six year history...

Newman Tonks company has named Mike Kolbus president of NT Harloc, Inc. NT Harloc manufactures residential and commercial locksets,

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leversets and deadbolts. Kolbus began his career in the automotive industry and held management positions in purchasing and purchasing research...

Martin E. Rosenfeld, A.H.C. has joined the **Newman Tonks** organization as Specialty Sales Coordinator. Martin will be working directly with NT Falcon Lock, NT Monarch and NT Quality Hardware companies. His experience includes locksmith and contract hardware distribution and sales from a manufacturing level...

Detex Corporation recently announced the promotion of **Mark**



Mark Crandall

Crandall to product manager for the **PAL** product line of Personal Alert Safety System (PASS) Devices. Crandall joined **Detex** in 1986 as a draftsman and has steadily moved up through the company in the engineering department to this new position...

JLM Wholesale has been selected by **Security Door Controls (SDC)** to market the company's full line of products nationwide. A multi-level wholesaler, **JLM** was recently honored as one of Michigan's 10 fastest growing, privately held firms...

Corbin Russwin Architectural Hardware announces the appointment of **Jeffrey K. Hochstrate** to Sales Manager, Southwest Region. Mr. Hochstrate



Jeffrey K. Hochstrate

joined **Corbin Russwin** in 1982 and had sales responsibilities in several states including California, Missouri, Indiana, Illinois, Kentucky, and Northern Texas. A graduate of Central Connecticut State University, Mr. Hochstrate currently lives in Dallas, Texas, with his wife and son...

Abloy Security, Inc. of Dallas Texas recently completed their "Partners Inc. Education Program".



Charlie Armstrong, Charles Gibson

The program was developed to support the **ALOA Education Fund**. **Abloy's** General Manager, **Charlie Armstrong**, was happy to present **Charles Gibson**, Staff Administrator of **ALOA**, with a check for over \$1,800.



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BITS & PIECES

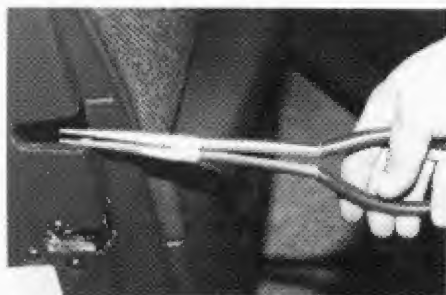
Informative Tidbits for the Security Industry

The 1993 GM "S" body, the new style Camaro and Firebird is making life a little easier when it comes to servicing the door locks. On these models there is an access hole in the door edge just above the latch. From this point, the linkage can be disconnected and the door lock clip pulled off.



by
Tom Seroogy

The door lock clip is positioned straight up. By using a long needle nosed pliers, the clip can be grasped and removed. An excellent pliers style for this clip removal is commonly called the "Stork." It can be purchased from any Snap-On tool distributor as part #911CP. (See photograph 1.)



1. The "Stork" used to reach in and remove the lock clip.

The door and body panels of these vehicles are not metal. Instead, a Sheet Molded Composite or SMC material is used. This material is a composition of several plastics, resins and fiberglass pieces that are injected molded.

Look for long term problems here as a vice-grip, large pliers and a few other tools can be used to grab the outside lock face and turn the whole lock. This, of course, strips the lock positioning tabs on the door panel, making service impossible without first having the door repaired.

Opening these model vehicles is also easy. Using a wedge and light to see inside the door area, the horizontal lock linkage can be easily grasped

using various types of slide lock tools and moved to unlock the car.

All models incorporate the airbag/VATS combination. While not all models have glove box locks, those that do are sporting a new type.

Stay tuned in later issues as we take you from start to finish on one of these cars!

In Bits & Pieces, March 1993, *The National Locksmith* confirmed that 1990 Corvettes do, in fact, have a progressive time delay on the VATS system. This has been confirmed by Gordon Killabrew, Corvette Engineer (currently retired) and Tom Mazzone, Mazzone Lock and Key, Streamwood, IL.

Mazzone took me to work on one of these model Corvettes. Testing the timing sequence between each incorrect try of a new VATS key showed that the timing period after the first three keys is three minutes. Timing after trying an unsuccessful fourth key jumps to ten minutes between each attempt.

This finding has also been checked and confirmed by Kent Moore, maker of the GM VATS decoder PASS/VATS Interrogator (part # J35628-A). According to Kent Moore this timing difference does not affect the ability of the Interrogator to make keys for the 1990 Corvette. To use the Interrogator on these models, simply use the unit's four minute timer as normal for trying the first four keys. If a key is not found by the fourth try, simply reset the timer three times before the next attempt, and after each attempt thereafter. Resetting the timer three times allows for a 12 minute period between the next attempt, well within the 10 minute limit.

Silca is releasing new keyblanks for the 1994 GM "N" body vehicles. These

cars, having previously used the Alpha-Tech ignition, will now use a nine cut courtesy keyed ignition. The Silca numbers are GM37 with the standard head, and GM37EP for the rubber head version. Also are the 1994 Chrysler CY22 standard head and CY22P rubber head.

A recent article in the real estate section of the Chicago Tribune newspaper reveals that while the ADA laws have been in existence for over 18 months, that there has been little litigation concerning the new law. The article states that the first year of the law's enactment allowed companies and businesses to change and act through good faith efforts. Today, however, disabled advocacy groups and the U. S. Justice Department's ADA office are now positioning themselves for enacting and enforcing the law.

Locksmith's should not only be aware of what ADA requires, but should also start informing current customers of the needed and necessary changes. Those locksmiths that do not take advantage of helping their customers with this new law are hurting themselves as well as their customers.

Auto Security Products has just released their most recent catalog update including over 140 new items for foreign car lock service. This brings to 1500 the current number of parts available from ASP. For owners of the catalog that have not received this new update, write to ASP at P.O. Box 2937, Kirkland, WA 98083-2937. Be sure to include your shop name, the correct return address, and the catalog reference number that appears in the front of your current catalog.

If you do not have a catalog, one can be obtained from any ASP distributor.

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LIGHTER SIDE

Service With A Smile

I suppose there isn't a locksmith anywhere who hasn't had to deal with the fact of law-enforcement officers opening vehicles as a "public service."



by
Sara Probasco

Under these circumstances, sooner or later a locksmith is summoned, either by the "servicee" or the "servicor," when the best laid plans of mice and public servants go awry.

Recently, I had occasion to interview a locksmith regarding his experiences along these lines.

"I'll never forget one night, when the police called me. They said they had a Corvette that needed to be opened," Gerry reminisced. "What they neglected to tell me was, they'd already tried to get it open for the owner, before they called me."

"What year model?" I asked.

"'83 or '84, I forget which. Anyway, when I arrived at the location, I found a Slim Jim stuck in the passenger door."

"Umm humm," I smiled and nodded knowingly.

"If they'd messed up that door, only, it wouldn't have been so bad, but they'd pulled the linkage loose on the driver's side, first."

"Oh, great," I commented. "So, what did you do?"

"The only thing I could do: I went in through the T-top."

"I can see this getting expensive."

"Five hundred dollars, total."

"Whew! I'll bet the car owner hit the ceiling over that."

Gerry smiled. "No, but the police department did. That's who I made the bill out to. I figured, if they hadn't messed up both doors, it would have been a standard opening, but as it was...." He shrugged. "Of course, I repaired both doors and put back the T-top for that price. But I kept the Slim Jim."

"You're kidding."

"No. Nobody would admit to being the one who had used it, so the Police

Chief suggested I hang onto it and let him know if anybody claimed it, later. Sure enough, after a week or ten days had passed, this sergeant came by the shop wanting to know if I had the Slim Jim from that job. 'Yeah,' I said, 'is it yours?' Well, he hesitated, said something about figuring it must belong to somebody on the force, and he thought he'd take it to the station, that kind of garbage. I told him I'd be glad to give it to whomever it belonged to, whenever they came by to get it. Needless to say, nobody ever came."

"Did you tell the chief about the sergeant coming by?"

"I didn't have to. Three, four months later, the same officer hung another Slim Jim in a new 280Z. This time, he admitted he'd done them both. After the chief got my bill for that one, he sent out a memo that policemen would no longer be permitted to open vehicles. Then he collected all their Slim Jims and brought them to my shop. I don't know if the sergeant wound up having to pay back those bills, himself, or what, but we haven't had any more trouble with law enforcement officers opening cars."

Gerry laughed, his eyes twinkling. "I guess the Devil made me do it: I had one of the Slim Jims framed and sent it to the sergeant, anonymously, for Christmas that year."

After our chuckles died down, I asked, "What else can you tell me about your experiences in opening vehicles? Has anything out of the ordinary happened lately?"

Gerry thought for a minute, then his face brightened. "I guess one of the most unusual openings I ever handled came when this guy called me to get his keys out of his trunk. When I got to his vehicle, I noticed the trunk wasn't closed tightly. In fact, it stood ajar by an inch or so. That seemed awfully strange, to me. Yet, when I tried to raise the lid, it wouldn't budge."

"What was it, a sprung hinge?" I asked.

"No. I looked in through the crack

and could see the trunk was jam-full, and the lid was tied down with a cord, so I reached into my pocket, opened up my knife, and cut the cord."

"Did that do the trick?"

"Sure. The lid popped right up, but so did my customer's blood pressure. Hoo, was he ever mad!"

"About what?"

"You know, I was never quite sure. You'd have thought I'd ruined the finish on his car, or something. I reached inside for his keys and handed them to him, then I retied the trunk for him, while he kept yelling at me about cutting his precious cord. I never did understand what the problem was. He kept saying, 'I didn't know you were going to cut my rope. I thought you had some kind of tool you could use to reach inside and get the keys.' That was weird."

"I'll agree. You seem to encounter some strange situations in this business. Can you tell me of others?"

Gerry laughed out loud. "That's easy. Just the other day, two young guys came into the store for a couple of padlocks. After looking around a bit, they decided upon the American locks with colored aluminum cases."

"What color did you want?" I asked, indicating the display samples on the wall.

"Purple," was the reply.

"I tried to be patient in explaining that we had only red, blue, gold, green, and brown, as shown on the display, but they were insistent upon having purple."

"Finally, I jokingly suggested one take red and the other blue, as red and blue combine to make purple. 'Just think,' I told them, 'it can be your secret. The rest of the world may see them only as red and blue padlocks, but you two will know that, together, both locks are really purple.' I thought they knew I was teasing, but they grinned at each other and said, 'Hey, yeah! Cool, man!' I guess it made them happy. They left smiling, happy with their newly purchased red and blue padlocks."



BEGINNER'S CORNER

Recondition a Kwikset Exterior Handle Set

This Kwikset handle set design does not include a lock set. It was removed from the front door of one of 125 residential units in a town house complex that



by
Eugene Gentry

included 60 buildings. All of the front doors have this same design handle set.

The complex is about 15 years old, so the handle sets are showing wear, usually the cause of malfunction is a broken spring or a lever that has jumped off a pivot pin. Because all of the buildings have a similar design, the association that runs the complex wanted the older handle sets reconditioned (see photograph 1), rather than buying new gets that do not match. Of course cost was a factor also.



1. Decorative handle set.

Following is a method of reconditioning this type of handle set.

Remove the handle set from the door by taking out the two screws by the inside knob and one screw lower in the door that holds the bottom of the set to the door.

Remove the two screws at the rear of the set and lift the cover plate off. (See photograph 2.) As we lift the plate off this set, we can see right away why the handle set was not operating. The pivot pin has worn and the lever has jumped off. (See photograph 3.) The lever is



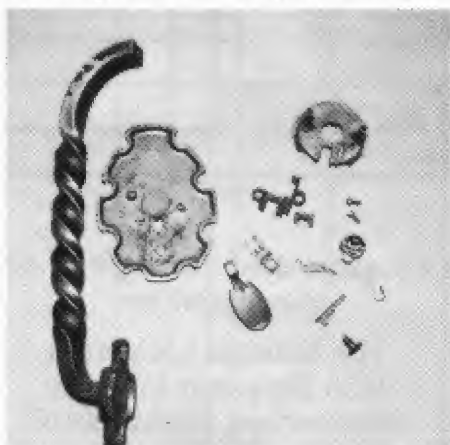
2. Remove two screws to remove cover plate.



3. Lever has jumped off pivot pin, laying at an odd angle, but the spring and other parts seem to be intact.

Take out all the parts including a lever, a spring, and two sliding bars. Watch how they operate and where they are located so that you can replace them exactly in the same place. Place all the parts in a can of cleaning solution. I use denatured alcohol, however you may have a solution you like. (See photograph 4.)

Remove the single large screw and take out the thumb piece. Clean the working end of this by hand as the



4. Place parts in cleaning solution.

solution may damage the finish on the exterior part.

While these parts are soaking, we are ready to repair the worn pin. File the pin down flat with its base. (See photograph 5.) Punch the center, and drill a 3/32" hole. You can use a hand drill, but you have to be careful that the hole is straight, and that you don't drill through the case. If you use a drill press you will be able to adjust the depth.



5. Drill out pedestal 3/32".


Use a steel roll pin to press into the hole. (See photograph 6.) These roll pins are available in various sizes and can be purchased at the hardware stores. Now you can either cut or file the top of the pin until the cover fits in place.



6. Tap in 3/32" steel roll pin.

In case the spring is broken you can make a new spring by using flat 1/8" spring steel. Cut a piece about 1/2" long and bend it in the middle at about a 45 degree angle. When you place it be sure that it makes contact with the lever.

The parts are now clean and the handle set is ready to be reassembled. Put the thumb piece and holder on first with the large single screw, then set in the plastic guides over the outer pins. Continue placing lever, spring and shafts into place. Put on the cover plate and attach with the two screws.

The unit is now ready to install. 



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Technitips

Continued from page 12

I would like to submit this Technitip to all those would-be locksmiths that are crying the blues because they can't get experience working on automotive locks without the liability and pressures of having the customer at their back. Go to an auto wrecking yard, and work at opening and making keys for the locks. You are sure to find a yard that will be glad to let you make keys for late model columns and doors. Simply walking through the rows of wrecks, looking at the inside of various doors, which have had their interior trim removed, will help you to visualize the arrangement of various types of linkages and mechanisms. Purchase a set of locks from one of the wrecks, and remove them as you would from a customers car, without damaging the trim panels. You can purchase a fine collection of foreign and domestic locks, at very little expense, while gaining valuable experience and confidence. Label the locks you purchase, according to the year and model of auto which they fit. Complete sets of locks can be wired together and tagged. Make keys and disassemble the locks on a rainy day, or when you are not working on a money making lock job. Opportunity is not something you have to ask someone to "give" you. It's at your door. Go get it!

Leo Koulogianes
Tennessee

Editors Note: Amen



Five Minute Cavalier

Continued from page 30

until the key turns. Once the key has turned, bump the key up and down to obtain impression marks. Turn the ignition to the "Off" position and remove the key.

The spaces that use 3 depths will leave impressioning marks, those that have 2 depths will leave no marks. Cut a new key using the new found 2 and 3 depths.

The key is finished.

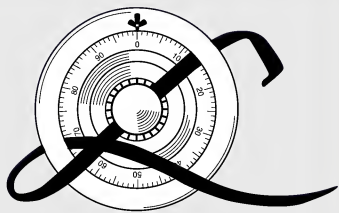
In this writer's first try, there were five 2/3 depths, four of them were the last four cuts. Following the impressioning process, a key was completed within ten minutes. The impression marks were very visible.

One problem noted with this procedure is that the Alpha Tech

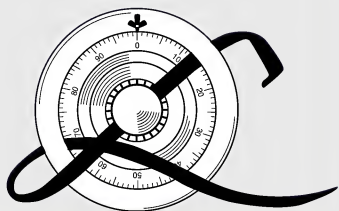


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cylinder has a second sidebar ward in the cylinder. When the key turned to the "On" position during the impressioning, the plug locked in place. It was easily freed by gently rapping the head of the key with the impressioning mallet while turning towards the "Off" position.

To date, Alpha-Cracker depth finding keys seem to be a good first method for making the Alpha Tech ignition. If there are any major drawbacks it may be the experience of the user. The keys are easy to use, and in the hand of an experienced locksmith a first key should take no longer than 15 to 20 minutes to generate. For those less experienced it may take longer, but like any tool, practice makes perfect (and profit).

Watch the magazine next month for marketing and price information on the Alpha-Cracker.



Jailhouse Lock

Continued from page 44

questions. I found out for instance that he worked for Southern Steel, A detention lock manufacturer located in San Antonio, Texas and that Southern Steel periodically offered classes in detention lock servicing to anyone that had a Southern Steel System they were maintaining. The one drawback was that they required you be sponsored by the facility that had this type of equipment.

That was all I needed to know. I immediately contacted the maintenance engineer and asked if he would sponsor me to attend these classes. He said that he would and had his secretary draft a letter on county stationery and I was on my way!

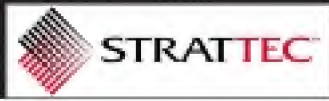
I contacted Southern Steel to get the information on their classes. Once I established that I was indeed sponsored by a facility that used their locks I was sent all the information I needed to attend the next training session.

With the first service experience you hear the whir of the motor as the door starts to close behind you. The loud steel-against-steel bang startles you to an awareness of your new state, as the door completes its locking cycle. You now find yourself standing inside a room full of convicts. They are all staring at you with that same blank stare, silently asking themselves the



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same question you're asking yourself, "what are you doing here?"

Now is the moment you decide whether you are a jailsmith or not. The sign on the wall catches your attention: "If you are taken hostage, nothing you or your captor can do will cause the release of the prisoner. You enter this facility at your own risk."

That sign remains in the back of the mind as you and your toolbox are inventoried and inspected. Hearing the sound of a prison door close behind you, locking you inside a pod with 96 prisoners for the first time is a frightening experience, especially when you remember that sign. This is the job of a jailsmith, a specially trained locksmith that has chosen to train on the large detention locks used in most jails and prisons. What would cause any man to want to do this? Ask yourself.



Keep "Ze Vagon" Full

Continued from page 60

you really don't have an answer, tell the customer to give you an hour, or so to check on the availability of the item, and you'll get back to him. Then, do it! That's one of the ways you turn "occasional" customers, into "regular" customers.

The same principle applies to panic hardware, alarmed exit devices, or any "specialty hardware" that you may need. These items are more expensive than most locksmiths would want to stock. And because the suppliers of those units usually have a broad selection in stock, and are willing to ship it to you the same day, you don't need to! All you need to do is call, tell the supplier what you want, and how you want it shipped.

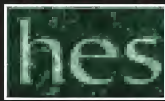
Pop's advice: "You can' zell from no empty vagon, By" is as true today, as it has ever been. But with the advent of UPS, and their "Red Label" program, you are now able to keep your "vagon" filled with the fast moving, everyday items ("Efferbody got garden. Efferbody got dime!"), that you need. You don't need to tie up money in slow moving, high-dollar, inventory items. By not tying that money up, you will have more "quarter(s) for the "pitchur, Sa'day."

Even though Pop would have never dreamed that the "pitchurs" would wind up costing \$5.00, and candy bars a \$1.50; his advice, over the years, has



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stood me in good stead. What I would really like to say to him is: "Pop, I ain't zellin' from no empty wagon. Only now, Pop, der vagon izza big, brown, truck ... ent it comfs here efferday!" He'd like that.



LaGard 2200 Time Delay

Continued from page 64

drops this time, it sends a signal to the solenoid in the lock and it retracts while turning the key to the full-stop position. This solenoid is located directly behind the micro-switch and keeps the bolt from retracting.

This solenoid can be seen (See photograph 8) and drilled for if it does not work. It is in the upper rectangular cut out, 1/3 of the way from the left end.

If the keys to the pin tumbler lock are lost, then this lock must be picked clockwise before the safe door will open.

Here is an interesting fact. The key blank I use for this is the old VOLVO single sided ignition lock, V61A or 65V. These are Ilco key numbers and work on many of these imported safes. Although the blank is not quite high enough, it will work for the "O" cuts on these locks. Don't Delay, and Prosper!!!



Bits & Pieces

Continued from page 74

Jet has a new release of keyblanks, the CB3, CB4, CB5, CB6 to fit the Club anti-theft steering lock series C, D, E, and F, respectively. Also released is the B84 for the 1993 GM Cavalier, Grand Am, Sky Lark, and Achieva; and the TR-53 for the 1993 Corolla Wagon.

Almont Lock has just recently purchased all machinery, tooling and remaining inventory from Superior Lock, Inc. a manufacturer of mortise, rim, dummy and thumb turn cylinders. Congratulations and the best of luck on this new acquisition.



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